

Appendix 1

Direct Testimony of Paul A. Cillo; NHPIRG DE: 04-052

NH PIRG Analysis of PNSH PAYS® Pilot Data

Data Baed on PSNH File in response to NHPIRG Q-01 on 05/06/2004 Q-NHPIRG-001 Attachment

PSNH PAYS® Pilot Results to Date

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Table T-1																							
		Estimated Annual \$ Savings				Meaure		Net Cost		Monthly		Eligible		Max		PDC Pmt		Unnecessary		Necessary		Revised	
No.	Status	Type of Project	kWh	Non- k Elect W ic	Total	Life (Years)	Cost of Project (w/o 5% Adder)	Rebate Amount	of PAYS Project	PDC Charge	Core Rebate	Max Term	Max PDC (3/4-3/4)	PDC Pmt (Max Term)	Pass/ Fail	Rebates	Rebate	PDC Pmt (w/ Rebate)	Pass/ Fail	Pass/ Fail	Saved Rebate		
1	1	Complete Street Lighting Conv.	\$6,292		\$6,292	20	\$13,703	\$0	\$14,388	\$326	\$0	180	\$393.25	\$108.36	PASS	\$0							
2	2	Complete Lighting Retrofit	\$8,631		\$8,631	10	\$42,000	\$7,500	\$36,225	\$477	\$7,500	90	\$539.46	\$560.58	FAIL		1585	\$539.43	PASS		\$5,915		
3	3	Complete Exit Signs Retrofit	\$599		\$599	20	\$2,676	\$0	\$2,810	\$31	\$937	180	\$37.44	\$21.16	PASS	\$0							
4	4	Complete Lighting Retrofit	\$1,269		\$1,269	10	\$6,362	\$1,120	\$5,504	\$102	\$1,120	90	\$79.32	\$84.91	FAIL		420	\$79.31	PASS		\$700		
5	5	Complete Lighting Retrofit	\$1,435		\$1,435	10	\$5,770	\$1,440	\$4,547	\$117	\$1,440	90	\$89.71	\$77.02	PASS	\$1,440							
6	6	Complete Lighting Retrofit	\$2,327		\$2,327	10	\$12,652	\$3,680	\$9,421	\$192	\$3,680	90	\$145.43	\$168.87	FAIL		1760	\$145.38	PASS		\$1,920		
7	7	Complete Lighting Retrofit	\$1,725		\$1,725	10	\$10,729	\$2,880	\$8,241	\$142	\$2,880	90	\$107.82	\$143.20	FAIL		2660	\$107.70	PASS		\$220		
8	8	Complete Lighting Retrofit	\$1,761		\$1,761	11	\$13,303	\$3,840	\$9,936	\$146	\$3,840	99	\$110.06	\$164.26	FAIL		3840	\$116.85	FAIL		\$0		
9	9	Complete Lighting Retrofit	\$879		\$879	10	\$4,200	\$0	\$4,410	\$72	\$1,028	90	\$54.91	\$56.06	FAIL			\$56.06	FAIL		\$0		
10	10	Complete Lighting Retrofit	\$920		\$920	10	\$4,273	\$1,600	\$2,806	\$67	\$1,600	90	\$57.52	\$57.03	PASS	\$1,600							
11	11	Complete Lighting Retrofit	\$9,889		\$9,889	10	\$47,254	\$13,120	\$35,841	\$746	\$13,120	90	\$618.03	\$630.71	FAIL		950	\$618.03	PASS		\$12,170		
12	12	Complete Lighting Retrofit	\$6,655		\$6,655	10	\$37,060	\$13,220	\$25,032	\$521	\$13,220	90	\$415.95	\$494.64	FAIL		5898	\$415.92	PASS		\$7,322		
13	13	Complete Lighting Retrofit	\$1,101		\$1,101	10	\$3,488	\$1,172	\$2,432	\$81	\$1,172	90	\$68.81	\$46.56	PASS	\$1,172							
14	14	Complete Lighting Retrofit	\$1,739		\$1,739	10	\$6,938	\$4,149	\$2,928	\$135	\$4,149	90	\$108.68	\$92.60	PASS	\$4,149							
15	15	Complete Lighting Retrofit	\$286		\$286	10	\$2,624	\$1,480	\$1,201	\$16	\$1,480	90	\$17.87	\$35.02	FAIL		1285	\$17.87	PASS		\$195		
16	16	Complete Lighting Retrofit	\$885		\$885	15	\$8,978	\$2,420	\$6,886	\$60	\$2,420	135	\$55.34	\$87.09	FAIL		2420	\$63.61	FAIL		\$0		
17	17	Complete Lighting Retrofit	\$3,859		\$3,859	12	\$21,940	\$8,275	\$14,349	\$205	\$8,275	108	\$241.17	\$252.69	FAIL		1001	\$241.16	PASS		\$7,274		
18	18	Complete Lighting Retrofit	\$306		\$306	12	\$976	\$255	\$757	\$17	\$255	108	\$19.14	\$11.24	PASS	\$255							
19	19	Complete Lighting Retrofit	\$4,164		\$4,164	12	\$26,644	\$7,140	\$20,480	\$209	\$7,140	108	\$260.22	\$306.87	FAIL		4055	\$260.17	PASS		\$3,085		
20	20	Complete Lighting Retrofit	\$846		\$846	12	\$5,083	\$1,440	\$3,825	\$42	\$1,440	108	\$52.85	\$58.54	FAIL		495	\$52.84	PASS		\$945		
21	21	Complete Lighting Retrofit	\$417		\$417	10	\$2,740	\$745	\$2,095	\$34	\$745	90	\$26.04	\$36.57	FAIL		745	\$26.63	FAIL		\$0		
22	22	Complete Lighting Retrofit	\$735		\$735	10	\$4,529	\$1,280	\$3,411	\$60	\$1,280	90	\$45.92	\$60.45	FAIL		1090	\$45.90	PASS		\$190		
23	23	Complete Lighting Retrofit	\$1,000		\$1,000	10	\$6,126	\$1,600	\$4,752	\$79	\$1,600	90	\$62.48	\$81.76	FAIL		1450	\$62.41	PASS		\$150		
24	24	Complete Lighting Retrofit	\$10,243		\$10,243	10	\$27,290	\$6,480	\$21,851	\$560	\$6,480	90	\$640.21	\$364.25	PASS	\$6,480							
25	25	Complete Lighting Retrofit	\$755		\$755	10	\$4,702	\$1,480	\$3,383	\$63	\$1,480	90	\$47.19	\$62.76	FAIL		1170	\$47.14	PASS		\$310		
26	26	Complete Lighting Retrofit	\$4,204		\$4,204	15	\$23,957	\$0	\$25,155	\$349	\$4,405	135	\$262.73	\$232.38	PASS	\$0							
27	27	Complete Lighting Retrofit	\$648		\$648	15	\$1,250	\$0	\$1,313	\$35	\$0	135	\$40.50	\$12.13	PASS	\$0							
28	28	Complete Lighting Retrofit	\$3,479		\$3,479	15	\$9,461	\$4,731	\$4,966	\$191	\$4,731	135	\$217.42	\$91.77	PASS	\$4,731							
29	29	Complete Lighting Retrofit	\$2,137		\$2,137	11	\$13,978	\$2,945	\$11,585	\$117	\$2,945	99	\$133.55	\$172.60	FAIL		2945	\$136.23	FAIL		\$0		
30	30	Complete Lighting Retrofit	\$1,712		\$1,712	10	\$10,965	\$4,275	\$7,025	\$95	\$4,275	90	\$107.01	\$146.35	FAIL		2950	\$106.98	PASS		\$1,325		
31	31	Complete Lighting Retrofit	\$1,025		\$1,025	15	\$2,700	\$1,500	\$1,260	\$53	\$1,500	135	\$64.05	\$26.19	PASS	\$1,500							
32	32	Complete Lighting Retrofit	\$1,188		\$1,188	10	\$52,542	\$20,300	\$33,854	\$651	\$20,300	90	\$742.63	\$701.29	PASS	\$20,300							
33	33	Complete Lighting Retrofit	\$1,615		\$1,615	15	\$6,800	\$1,830	\$5,219	\$130	\$1,830	135	\$100.93	\$65.96	PASS	\$1,830							
34	34	Complete Lighting Retrofit	\$3,032		\$3,032	15	\$16,941	\$5,305	\$12,218	\$167	\$5,305	135	\$189.52	\$164.33	PASS	\$5,305							
35	35	Complete Lighting Retrofit	\$1,486		\$1,486	15	\$10,505	\$2,470	\$8,437	\$81	\$2,470	135	\$92.87	\$101.90	FAIL		933	\$92.85	PASS		\$1,537		
36	36	Complete Lighting Retrofit	\$1,413		\$1,413	15	\$12,000	\$1,925	\$10,579	\$78	\$1,925	135	\$88.32	\$116.40	FAIL		1925	\$97.73	FAIL		\$0		
37	37	Complete Street Lighting Conv.	\$7,884		\$7,884	20	\$40,590	\$0	\$42,620	\$435	\$0	180	\$492.75	\$320.98	PASS	\$0							
38	38	Complete Lighting Retrofit	\$3,068		\$3,068	10	\$17,359	\$3,155	\$14,914	\$168	\$3,155	90	\$191.75	\$231.70	FAIL		2995	\$191.72	PASS		\$160		
39	39	Complete Lighting Retrofit	\$296		\$296	10	\$2,154	\$585	\$1,647	\$15	\$585	90	\$18.50	\$28.75	FAIL		585	\$20.94	FAIL		\$0		
40	40	Complete Lighting Retrofit	\$2,208		\$2,208	10	\$6,568	\$1,775	\$5,032	\$123	\$1,775	90	\$138.00	\$87.66	PASS	\$1,775						\$1,775	
41	41	Complete Lighting Retrofit	\$724		\$724	10	\$2,323	\$570	\$1,840	\$40	\$570	90	\$45.25	\$31.00	PASS	\$570						\$570	
42	42	Complete LED Traffic Lights	\$14,019		\$14,019	10	\$73,310	\$21,800	\$54,086	\$1,151	\$21,800	90	\$876.19	\$978.48	FAIL		7665	\$876.18	PASS		\$14,135		
43	43	Complete Lighting Retrofit	\$5,849		\$5,849	15	\$49,275	\$10,000	\$41,239	\$404	\$10,000	135	\$365.55	\$477.97	FAIL		10000	\$380.97	FAIL		\$0		
44	44	Complete Lighting Retrofit	\$6,926		\$6,926	15	\$48,026	\$10,000	\$39,927	\$384	\$10,000	135	\$432.88	\$465.85	FAIL		3400	\$432.87	PASS		\$6,600		

PSNH PAYS® Pilot Results to Date

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Table T-1

No.	Status	Type of Project	Estimated Annual \$ Savings				Measure Life (Years)	Cost of Project (w/o 5% Adder)	Rebate Amount	Net Cost of PAYS Project	Monthly Eligible			Max PDC (3/4-3/4)	PDC Pmt (Max Term)	Pass/Fail	Unnecessary Rebates	Necessary Rebate	PDC Pmt (w/ Rebate)	Revised Pass/Fail	Saved Rebate	
			kWh	Non-Elect	W	ic					Total	PDC Charge	Core Rebate									Max Term
45	45	Complete Lighting Retrofit	\$8,924				\$8,924	15	\$61,428	\$10,000	\$53,999	\$495	\$10,000	135	\$557.75	\$595.85	FAIL		3930	\$557.73	PASS	\$6,070
46	46	Complete Lighting Retrofit	\$715				\$715	15	\$5,620	\$1,200	\$4,641	\$40	\$1,200	135	\$44.69	\$54.51	FAIL		1013	\$44.69	PASS	\$187
47	47	Complete Lighting Retrofit	\$2,463				\$2,463	15	\$8,600	\$2,560	\$6,342	\$135	\$2,560	135	\$153.94	\$83.42	PASS	\$2,560				
48	48	Complete Lighting Retrofit	\$1,073				\$1,073	15	\$6,299	\$1,920	\$4,598	\$61	\$1,920	135	\$67.07	\$61.10	PASS	\$1,920				
49	49	Complete Lighting Retrofit	\$5,234				\$5,234	15	\$20,162	\$10,474	\$10,172	\$289	\$10,474	135	\$327.10	\$195.57	PASS	\$10,474				
50	50	Complete Lighting Retrofit	\$3,895				\$3,895	15	\$32,512	\$9,326	\$24,345	\$277	\$9,326	135	\$243.44	\$315.37	FAIL		7416	\$243.43	PASS	\$1,910
51	51	Complete Lighting Retrofit	\$3,350				\$3,350	15	\$17,134	\$4,680	\$13,077	\$184	\$4,680	135	\$209.38	\$166.20	PASS	\$4,680				
52	52	Complete Lighting Retrofit	\$2,335				\$2,335	15	\$11,364	\$4,500	\$7,207	\$129	\$4,500	135	\$145.94	\$110.23	PASS	\$4,500				
53	53	Complete Lighting Retrofit	\$1,588				\$1,588	10	\$7,717	\$2,400	\$5,583	\$87	\$2,400	90	\$99.24	\$103.00	FAIL		283	\$99.22	PASS	\$2,117
54	54	Complete Lighting Retrofit	\$5,321				\$5,321	15	\$16,846	\$8,423	\$8,844	\$295	\$8,423	135	\$332.57	\$163.41	PASS	\$8,423				
55	55	Complete Lighting Retrofit	\$2,405				\$2,405	15	\$8,664	\$4,332	\$4,548	\$130	\$4,332	135	\$150.32	\$84.04	PASS	\$4,332				
56	56	Complete Lighting Retrofit	\$1,104				\$1,104	12	\$2,053	\$1,026	\$1,078	\$60	\$1,026	108	\$69.00	\$23.64	PASS	\$1,026				
57	57	Complete Lighting Retrofit	\$24,246				\$24,246	15	\$99,381	\$17,720	\$85,744	\$1,346	\$17,720	135	\$1,515.37	\$964.00	PASS	\$17,720				
58	58	Complete Lighting Retrofit	\$21,432				\$21,432	15	\$73,525	\$13,080	\$63,467	\$1,177	\$13,080	135	\$1,339.49	\$713.19	PASS	\$13,080				
59	59	Complete Lighting Retrofit	\$4,003				\$4,003	12	\$19,955	\$9,978	\$10,477	\$218	\$9,978	108	\$250.19	\$229.83	PASS	\$9,978				
60	60	Complete Lighting Retrofit	\$584				\$ Retr2t		03(\$9,978)-19.4(04(\$769178 0 TD3.977)-1945.3(\$218)-1255.4(\$9,978a 0 TD3.977)-1205.94)-1885.38977										\$10,469g128(57)-1207.7-7661.4(\$550.19)-1885.3(\$2292TJ-67.31			

58 58 Complete L4004(ng Retro4028 D696685\$584)-849568t

PSNH PAYS® Pilot Results to Date

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Table T-1

No.	Status	Type of Project	Estimated Annual \$ Savings			Measure Life (Years)	Cost of Project (w/o 5% Adder)	Rebate Amount	Net Cost of PAYS Project	Monthly PDC Charge	Eligible Core Rebate	Max Term	Max PDC (3/4-3/4)	PDC Pmt (Max Term)	Pass/Fail	Unnecessary Rebates	Necessary Rebate	PDC Pmt (w/ Rebate)	Revised Pass/Fail	Saved Rebate	
			kWh	Non-Elec	Wic																Total
95	95	Complete Lighting Retrofit	\$1,925			\$1,925	15	\$10,362	\$2,240	\$8,528	\$107	\$2,240	135	\$120.31	\$100.51	PASS	\$2,240				
96	96	Complete Lighting Retrofit	\$948			\$948	15	\$7,387	\$2,400	\$5,236	\$52	\$2,400	135	\$59.26	\$71.66	FAIL		1278	\$59.26	PASS	\$1,122
97	97	Complete Lighting Retrofit	\$1,106			\$1,106	15	\$5,911	\$1,920	\$4,191	\$71	\$1,920	135	\$69.13	\$57.34	PASS	\$1,920				
98	98	Complete Lighting Retrofit	\$2,298			\$2,298	12	\$2,400	\$1,200	\$1,260	\$126	\$1,200	108	\$143.65	\$27.64	PASS	\$1,200				
99	99	Complete Lighting Retrofit	\$3,062			\$3,062	12	\$2,384	\$1,192	\$1,251	\$156	\$1,192	108	\$191.40	\$27.46	PASS	\$1,192				
100	100	Complete Lighting Retrofit	\$852			\$852	12	\$1,889	\$945	\$992	\$47	\$945	108	\$53.26	\$21.76	PASS	\$945				
101	101	Complete Lighting Retrofit	\$196			\$196	12	\$438	\$438	\$460	\$11	\$438	108	\$12.25	\$10.08	PASS	\$438				
102	102	Complete Lighting Retrofit	\$646			\$646	12	\$3,832	\$1,916	\$2,012	\$35	\$1,916	108	\$40.35	\$44.14	FAIL		330	\$40.34	PASS	\$1,586
103	103	Complete Lighting Retrofit	\$2,862			\$2,862	12	\$6,998	\$3,499	\$3,674	\$153	\$3,499	108	\$178.87	\$80.60	PASS	\$3,499				
104	104	Complete Lighting Retrofit	\$3,399			\$3,399	10	\$19,513	\$9,757	\$10,244	\$186	\$9,757	90	\$212.47	\$260.45	FAIL		3595	\$212.46	PASS	\$6,162
105	105	Complete Lighting Retrofit	\$885			\$885	15	\$3,690	\$1,845	\$1,937	\$46	\$1,845	135	\$55.29	\$35.80	PASS	\$1,845				
106	1	In Process Lighting Retrofit	\$3,181			\$3,181	10	\$18,500	\$5,460	\$13,692	\$176	\$5,460	90	\$198.79	\$246.92	FAIL		3608	\$198.77	PASS	\$1,852
107	2	In Process Lighting Retrofit	\$1,839			\$1,839	5	\$8,165	\$4,083	\$4,287	\$102	\$4,083	45	\$114.93	\$199.37	FAIL		3459	\$114.91	PASS	\$624
108	3	In Process Lighting Retrofit	\$4,540			\$4,540	10	\$41,372	\$20,000	\$22,441	\$252	\$20,000	90	\$283.78	\$552.20	FAIL		20000	\$285.26	FAIL	\$0
109	4	In Process Lighting Retrofit	\$3,679			\$3,679	15	\$15,959	\$5,040	\$11,465	\$201	\$5,040	135	\$229.96	\$154.80	PASS	\$5,040				
110	5	In Process Lighting Retrofit	\$1,730			\$1,730	15	\$6,167	\$1,920	\$4,459	\$95	\$1,920	135	\$108.14	\$59.82	PASS	\$1,920				
111	6	In Process Street Lighting	\$7,542			\$7,542	20	\$59,362	\$0	\$62,330	\$416	\$0	180	\$471.38	\$469.43	PASS	\$0				
112	7	In Process Lighting Retrofit	\$6,667			\$6,667	10	\$21,975	\$10,988	\$11,537	\$361	\$10,988	90	\$416.69	\$293.31	PASS	\$10,988				
113	8	In Process Lighting Retrofit	\$7,044			\$7,044	10	\$24,065	\$12,033	\$12,634	\$383	\$12,033	90	\$440.27	\$321.20	PASS	\$12,033				
114	9	In Process Lighting Retrofit	\$171			\$171	10	\$4,873	\$2,437	\$2,559	\$95	\$2,437	90	\$10.68	\$65.05	FAIL		2437	\$32.52	FAIL	\$0
115	10	In Process Lighting Retrofit	\$25,557			\$25,557	10	\$130,643	\$50,000	\$84,676	\$1,411	\$50,000	90	\$1,597.31	\$1,743.73	FAIL		10970	\$1,597.31	PASS	\$39,030
116	11	In Process Lighting Retrofit	\$14,685			\$14,685	10	\$75,812	\$18,095	\$60,603	\$808	\$18,095	90	\$917.81	\$1,011.88	FAIL		7049	\$917.80	PASS	\$11,046
117	12	In Process Lighting Retrofit	\$21,876			\$21,876	10	\$60,551	\$23,640	\$38,756	\$1,211	\$23,640	90	\$1,367.25	\$808.18	PASS	\$23,640				
118	13	In Process Lighting Retrofit	\$1,375			\$1,375	12	\$10,044	\$2,345	\$8,084	\$76	\$2,345	108	\$85.94	\$115.68	FAIL		2345	\$88.68	FAIL	\$0
119	14	In Process Lighting Retrofit	\$695			\$695	10	\$3,786	\$1,893	\$1,988	\$38	\$1,893	90	\$43.41	\$50.53	FAIL		534	\$43.40	PASS	\$1,359
120	15	In Process Lighting Retrofit	\$1,472			\$1,472	10	\$2,354	\$1,177	\$1,236	\$77	\$1,177	90	\$92.02	\$31.42	PASS	\$1,177				
121	16	In Process Lighting Retrofit	\$251			\$251	10	\$996	\$498	\$523	\$14	\$498	90	\$15.68	\$13.30	PASS	\$498				
122	17	In Process Lighting Retrofit	\$680			\$680	10	\$2,849	\$1,424	\$1,495	\$37	\$1,424	90	\$42.53	\$38.02	PASS	\$1,424				
123	18	In Process Lighting Retrofit	\$1,800			\$1,800	10	\$11,913	\$5,956	\$6,254	\$99	\$5,956	90	\$112.52	\$159.00	FAIL		3493	\$112.38	PASS	\$2,463
124	19	In Process Lighting Retrofit	\$599			\$599	10	\$5,751	\$2,876	\$3,019	\$33	\$2,876	90	\$37.46	\$76.76	FAIL		2876	\$38.38	FAIL	\$0
125	20	In Process Lighting Retrofit	\$263			\$263	10	\$1,196	\$598	\$628	\$15	\$598	90	\$16.45	\$15.97	PASS	\$598				
126	21	In Process Lighting Retrofit	\$461			\$461	10	\$4,391	\$2,196	\$2,305	\$26	\$2,196	90	\$28.81	\$58.61	FAIL		2196	\$29.30	FAIL	\$0
127	22	In Process Lighting Retrofit	\$81			\$81	10	\$622	\$331	\$306	\$4	\$331	90	\$5.05	\$8.31	FAIL		245	\$5.04	PASS	\$86
128	23	In Process Lighting Retrofit	\$236			\$236	10	\$1,332	\$666	\$699	\$13	\$666	90	\$14.77	\$17.78	FAIL		228	\$14.73	PASS	\$438
129	24	In Process Lighting Retrofit	\$5,966			\$5,966	10	\$30,149	\$15,075	\$15,828	\$330	\$15,075	90	\$372.86	\$402.40	FAIL		2214	\$372.85	PASS	\$12,861
130	25	In Process Lighting Retrofit	\$645			\$645	10	\$5,133	\$2,567	\$2,695	\$35	\$2,567	90	\$40.34	\$68.51	FAIL		2112	\$40.32	PASS	\$455
131	26	In Process Lighting Retrofit	\$43			\$43	15	\$200	\$100	\$105	\$2	\$100	135	\$2.69	\$1.94	PASS	\$100				
132	27	In Process Lighting Retrofit	\$265			\$265	10	\$702	\$351	\$369	\$15	\$351	90	\$16.57	\$9.37	PASS	\$351				
			\$402,998			\$1,900,055		\$580,079							\$245,528	\$167,367				\$169,529	
						Total Projects	132														
						Projects that Fail Without Rebate	62														
						Projects that Fail With Rebate	13														
						Total Rebates That Could Be Avoided	\$415,057														
						Percent of Rebate Amount Not Needed	72%														
						Needed Rebate Amount as Percent of Cost of All Projects	8.81%														
						Rebates Applied by PSNH as a Percent of Cost of All Projects	30.53%														

Appendix 2

Direct Testimony of Paul A. Cillo; Docket DE: 04-052

NHPIRG PAYS® Residential/Small Commercial Lighting Option

PURPOSE

A low cost vendor-driven catalog program (CFLs and other items, such as low flow showerheads, flapperless toilets, programmable thermostats are added to the extent they screen cost effective). Catalog sales are supplemented by local retailers selling comparable products with the same program requirements.

REQUIREMENTS

- Bid process to identify catalog price for measures and usage criteria (i.e., determining minimum usage required to pass 3/4 – 3/4 rule at bid price).
- Program advertised by utilities or third party as CORE programs have been.
- Utility adds charge to customer's bill; the charge is not removed unless the customer leaves system (i.e., once ordered, only recourse is free product replacement under warranty program.
- Charge per basic Energy Star CFL is \$0.25 per month for 24 months with savings guaranteed with only 4 hours average use per day. Costs for other items to be computed.
- Other utility involvement minimized (no returns or billing changes, all complaints directed to Vendors, and use of bar coding technology to automate billing process and reduce vendor costs).

CATALOG SUPPLIER

Niagara Conservation (Vendor) has promised to bid to supply up to five CFL models. Each will be sold with direct shipment to customers at a cost of \$5.40 per CFL spread over twenty-four (24) payments (the 30 Watt Circle which is an appropriate replacement for a 150 watt reading lamp will cost twice that amount -- \$0.50 per month). Vendor will send customers their CFLs upon receipt of a signed customer agreement that also serves as a mailing label and billing form. Either it will be sent to customers as a bill stuffer or, if possible, designed to be downloaded and printed off the web. Vendor has promised to pack and ship CFLs directly to customers and replace any CFLs damaged in shipping. All CFLs will be warranted for the 24 month payment term offering free replacement shipped to any customer returning unbroken but non-working CFLs during the payment period. The only requirement other than being a customer is that a minimum order of 6 CFLs per customer. The actual Vendor will be the low price bidder. In other words, the actual prices will be as noted above or lower.

RETAIL SUPPLIER(S)

Any local retailer willing to process orders in accordance with program rules, sell items for the bid catalog prices (or less), use the same order form, and finance the purchases will be permitted to sell Energy Star CFLs with 8,000 hour lives or more and other approved catalog items as PAYS® products from their stores.

OFFER

Residential customers can purchase between 6 and 18 CFLs (11, 15, 20, 24 and 30 watts) and pay 25¢ per CFL for 24 months. Small commercial accounts will have a different ordering form and will not be limited to 18 CFLs. Residential customers will receive a net monthly electricity savings of approximately 18¢ per CFL during the payment term, even if only 40 watts are displaced and the replaced bulb has been used only four hours per day. On average they will receive net electric savings of \$32.40 plus an additional \$2.50 in avoided bulb purchase savings.

Once PAYS® charges are on their account, participants must pay all 24 months of payments. If they leave the utility service territory, they must pay all remaining payments at that time. The utility forwards payments to the Vendor for the CFLs over the 24 month payment term deducting a \$0.60 fee per CFL program charge that is also collected over the payment period. The utility is responsible for bad debt.

CONCEPT

Customer fills out the order form that has been sent to him/her as a bill stuffer or, if possible, is downloaded from a website. The order form serves as a PAYS® Agreement form, mailing label, and billing form. The form has the following information:

- The customer only saves more than the payment amount if the bulbs they are replacing are used at least an average of three hours per day.
- Their signature certifies their usage of at least three hours.
- Minimum order size is 6 CFLs. The maximum order size is 18 (residential customers only).
- If customers do not return the CFLs in good condition and in their original packaging within two weeks of receipt, the charge will be added to their monthly bills for the next 24 months.
- If the CFL fails during the 24 month payment term, customers must contact their Vendor for their free replacements. They will receive replacement CFLs upon returning the unbroken, non-working CFL to the Vendor.

The customer fills in the number of CFLs (s)he wants, signs the form and sends it or brings it to Vendor. The order form has bar code information including the customer's name and address and account information. The Catalog Vendor uses a bar code scanner to process the order, ships the CFLs to the customer.

The customer has 2 weeks from date of receipt of CFLs to return undamaged CFLs in original packaging to the Vendor (at customer's expense) or charges will go on their account. Returned CFLs will be used for other shipments or sales. After 2 weeks, the Vendor sends a list of orders shipped and order forms (in text and bar code) to the utility. Retail Vendor(s) also supply this information using bar code technology. The utility starts billing and makes the initial payment to the Vendor no less than two weeks (to ensure savings) or more than 30 days after receipt of the list.

If the bulb stops working during the warranty period, customer calls the toll free number or returns to store, arranges for unbroken bulb's return, and is shipped or given a brand new

replacement CFL (The utility/Vendor reserves the right to inspect CFLs prior to return – broken CFLs will not be replaced).

EXPLANATION OF BAR CODING TECHNOLOGY

Bar Coding Description. Neither NHPIRG nor its experts, claim to be expert in bar code scanner software or hardware. However, NHPIRG's experts investigated various companies with experience and expertise with this technology. Tim James and Laura Lathem, principals of Z-Space Technologies (440-899-7370 or <http://z-space.com>) provided the information used in this program concept.

Mr. James indicated that his firm could provide bar code software that would automate most or all of the processes required to deliver the program described herein. He also indicated that his firm would be able and willing to assist in the selection of appropriate hardware (e.g., development of appropriate specifications or referral to quality vendors) if any hardware were required (see description below).

Software would be used to put customers' account and address information on order forms either printed by the utility and sent to customers or downloaded from the web by vendors if that option is used. Any printer capable of printing these forms is capable of printing bar coding.

The vendor, who would also need a bar code reader, would be able to use this information to simplify its processing. The vendor would scan customer information from the orders with the bar code reader, manually input the sales data, develop a bar coded report which included the customer information and the order, and return the completed bar coded report to the utility electronically as well as providing the utility with hard copies of the order forms. The vendor would also provide a printed summary sheet of the number and type of each item sold as a PAYS® product. The above are all vendor rather than utility costs.

This electronic report would enable the utility to scan the information, call up the client's account information, and enter the appropriate charges in the place required to put the charges on the customer's bill, providing the utility's database included ODBC drivers or the equivalent. In this case, the utility staff's only responsibility would be to initiate an automated process to input the data into the utility's MIS system.

If for any reason this were not feasible, the utility could use a scan wedge or keyboard wedge hooked to a serial port on a utility terminal to input the correct information. In this case, utility staff would only need to review the information before finalizing the billing change. The cost per scan wedge would be approximately \$1,500. A single staff person or temporary worker using the reader should be able to input approximately 350 records per day (assuming an 8 hour day).

Mr. James estimates that his costs for developing the overall software paradigm; the software for one utility, and model software for vendors would be no more than \$25,000, including expenses, providing a reasonable amount of cooperation from the utility. However, if all four utilities participating in this docket replaced their Residential/Small Commercial Lighting Programs with this NHPIRG option, there would be substantial savings inasmuch as the initial program design would be the same, the vendor software would be identical or similar, and travel expenses might

be shared. The only differences would be accommodations to each utility's existing software and hardware.

Bar Coding Costs & Payback. Based on Mr. James estimates, a reasonable high estimate for the total cost for one utility to implement the bar coding software and hardware would be \$30,000. It is likely that his firm could do all four utilities for \$58,000 unless the systems and resources were too dissimilar. This does not include staff costs for training and inputting data. NHPIRG believes that since the vendor would be performing most program functions, especially if the electronic report can be automatically input, any such costs might be absorbed in the utilities' proposed budgets from those line items other than rebates.

NHPIRG has not requested nor received the utilities' proposed budgets for their 2005 Residential/Small Commercial Lighting programs. Therefore, there is no way to estimate the potential savings for unnecessary rebates that might be achieved. However, the utilities spent approximately \$1,162,554 on rebates during the past three years for these programs. If the savings for 2005 were equal to only a quarter of this amount (\$290,638.50), the simple payback for this hardware and software would be .2 years.

Sales Volume to Justify Bar Coding. The above payback assumes that NHPIRG's recommendation can achieve the same or greater participation as the utility's current Residential/Small Commercial Lighting program (at least as far as those items for which customers receive rebates). However, we believe that our recommendations are still financially viable if only 20% of the projected participants who would otherwise receive rebates used NHPIRG's proposed program each year since savings from avoided rebates pay for the changes in approximately one year.

APPENDIX 3

Direct Testimony of Paul A. Cillo; NHPIRG DE: 04-052

\$1 million/year in SBC Funding for 10 years

- Full Rebates (50%) Only
- 8% Shareholder Incentive

	SBC Funds for Rebates	Customer share	Total Projects
Year 1	\$ 920,000	\$ 920,000	\$ 1,840,000
Year 2	\$ 920,000	\$ 920,000	\$ 1,840,000
Year 3	\$ 920,000	\$ 920,000	\$ 1,840,000
Year 4	\$ 920,000	\$ 920,000	\$ 1,840,000
Year 5	\$ 920,000	\$ 920,000	\$ 1,840,000
Year 6	\$ 920,000	\$ 920,000	\$ 1,840,000
Year 7	\$ 920,000	\$ 920,000	\$ 1,840,000
Year 8	\$ 920,000	\$ 920,000	\$ 1,840,000
Year 9	\$ 920,000	\$ 920,000	\$ 1,840,000
Year 10	\$ 920,000	\$ 920,000	\$ 1,840,000

10-year Project Investment	\$	18,400,000
Receivables and fund balance net incentive	\$	-
Program Set-up Costs (billing, MIS, staff training, marketing, etc.)	\$	-
Total Funds Available for Project Investment	\$	18,400,000

APPENDIX 4

Direct Testimony of Paul A. Cillo; NHPIRG DE: 04-052

\$1 million/year in SBC Funding for 10 years

- Reduced Rebates (10%) with a Revolving Loan Fund -- No Leveraging
- 8% Shareholder Incentive on Rebates and Customer Payments to Fund

	SBC Funds for Rebates	SBC Contribution to Revolving Loan Fund*	Customer Payments from Previous Year**	Payments To Revolving Loan Fund After Shareholder Incentive***	Revolving Loan Funds Used for Projects	Total P
Year 1	\$ 100,000	\$ 900,000	\$ -		\$ 900,000	\$ 1,000,000
Year 2	\$ 115,760	\$ 884,240	\$ 180,000	\$ 157,600	\$ 1,041,840	\$ 1,157,600
Year 3	\$ 134,804	\$ 865,196	\$ 388,368	\$ 348,038	\$ 1,213,234	\$ 1,348,004
Year 4	\$ 156,975	\$ 843,025	\$ 631,015	\$ 569,749	\$ 1,412,774	\$ 1,569,750
Year 5	\$ 182,793	\$ 817,207	\$ 913,570	\$ 827,926	\$ 1,645,133	\$ 1,827,926
Year 6	\$ 212,857	\$ 787,143	\$ 1,242,596	\$ 1,128,565	\$ 1,915,709	\$ 2,128,565
Year 7	\$ 231,305	\$ 768,695	\$ 1,445,738	\$ 1,313,051	\$ 2,081,745	\$ 2,313,051
Year 8	\$ 250,292	\$ 749,708	\$ 1,653,719	\$ 1,502,917	\$ 2,252,626	\$ 2,502,917
Year 9	\$ 269,265	\$ 730,735	\$ 1,861,598	\$ 1,692,646	\$ 2,423,382	\$ 2,692,646
Year 10	\$ 287,708	\$ 712,292	\$ 2,063,719	\$ 1,877,080	\$ 2,589,372	\$ 2,877,080

Total 10-year Project Investment	\$ 19,4
Receivables and fund balance net incentive	6,1
Program Set-up Costs (billing, MIS, staff training, marketing, etc.)	\$ (
Total Funds Available for Project Investment	\$ 25,2

* SBC contribution to loan fund decreases to cover the additional cost of rebates as program activity increases.

** Assumes 5-year payment term with bad debt covered by the program charge.

*** Shareholder incentive is 8% of rebates and of customer payments from previous year.

APPENDIX 5

Direct Testimony of Paul A. Cillo; NHPIRG DE: 04-052

\$1 million/year in SBC Funding for 10 years

- Reduced Rebates (10%) with a Leveraging Guarantee Fund (4:1)
- 8% Shareholder Incentive on Rebates and Guarantee Fund

	SBC Funds for Rebates	SBC Contribution to Guarantee Fund Net Incentive*	Guarantee Funds Freed for Re-use**	Leveraged Funds Used for Projects	Total Projects
Year 1	\$ 307,692	\$ 692,308	\$ -	\$ 2,769,232	\$ 3,076,924
Year 2	\$ 300,118	\$ 675,267	\$ -	\$ 2,701,067	\$ 3,001,185
Year 3	\$ 300,305	\$ 675,686	\$ -	\$ 2,702,742	\$ 3,003,047
Year 4	\$ 300,300	\$ 675,676	\$ -	\$ 2,702,702	\$ 3,003,002
Year 5	\$ 300,300	\$ 675,676	\$ -	\$ 2,702,704	\$ 3,003,004
Year 6	\$ 457,082	\$ 474,586	\$ 553,846	\$ 4,113,731	\$ 4,570,813
Year 7	\$ 449,363	\$ 470,853	\$ 540,213	\$ 4,044,267	\$ 4,493,630
Year 8	\$ 449,648	\$ 471,159	\$ 540,548	\$ 4,046,830	\$ 4,496,478
Year 9	\$ 449,639	\$ 471,146	\$ 540,540	\$ 4,046,746	\$ 4,496,385
Year 10	\$ 449,639	\$ 471,147	\$ 540,541	\$ 4,046,750	\$ 4,496,389

10-year Project Investment	\$ 37,640,856
Receivables and fund balance net incentive	\$ 3,698,920
Program Set-up Costs (billing, MIS, staff training, marketing, etc.)	\$ (700,000)
Total Funds Available for Project Investment	\$ 40,639,776

* Shareholder incentive is 8% of rebates from previous year and of the amount of guarantee funds freed for re-use

** Assumes 5-year payment term with 10% bad debt.

5% of bad debt is covered by the program charge and the remaining 5% is covered by the guarantee fund.

Years 6-10 show re-use of guarantee funds once all project payments have been paid.

APPENDIX 6

Direct Testimony of Paul A. Cillo; NHPIRG DE: 04-052

\$1 million/year in SBC Funding for 10 years

- Full Rebates (50%) with a Revolving Loan Fund -- No Leveraging
- 8% Shareholder Incentive on Rebates and Customer Payments to Fund

	SBC Funds for Rebates	SBC Contribution to Revolving Loan Fund*	Customer Payments from Previous Year**	Payments To Revolving Loan Fund After Shareholder Incentive***	Revolving Loan Funds Used for Projects	Total Project
Year 1	\$ 450,000	\$ 550,000	\$ -		\$ 550,000	\$ 1,000,000
Year 2	\$ 505,000	\$ 495,000	\$ 110,000	\$ 65,200	\$ 560,200	\$ 1,065,200
Year 3	\$ 561,020	\$ 438,980	\$ 222,040	\$ 163,877	\$ 602,857	\$ 1,163,897
Year 4	\$ 621,306	\$ 378,694	\$ 342,611	\$ 270,321	\$ 649,015	\$ 1,270,626
Year 5	\$ 686,207	\$ 313,793	\$ 472,414	\$ 384,917	\$ 698,710	\$ 1,384,124
Year 6	\$ 756,078	\$ 243,922	\$ 612,156	\$ 508,287	\$ 752,209	\$ 1,508,365
Year 7	\$ 776,299	\$ 223,701	\$ 652,598	\$ 539,904	\$ 763,605	\$ 1,539,602
Year 8	\$ 796,640	\$ 203,360	\$ 693,279	\$ 575,713	\$ 779,073	\$ 1,578,712
Year 9	\$ 814,261	\$ 185,739	\$ 728,522	\$ 606,509	\$ 792,248	\$ 1,606,770
Year 10	\$ 828,585	\$ 171,415	\$ 757,169	\$ 631,455	\$ 802,870	\$ 1,631,959

10-year Project Investment

Receivables and fund balance net incentive

\$ 13,746

\$ 2,104

Program Set-up Costs (billing, MIS, staff training, marketing, etc.)

Costs unknown

Total Funds Available for Project Investment

\$ 15,851

* SBC contribution to loan fund decreases to cover the additional cost of rebates as program activity increases.

** Assumes 5-year payment term with bad debt covered by the program charge.

*** "Total Funds Available for Project Investment" will be reduced by unknown program set-up costs that will vary by utility.

Appendix 7

Direct Testimony of Paul A. Cillo; NHPIRG DE: 04-052

PAYS® Analysis Tool

CUSTOMER NAME:

SERVICE ADDRESS:

MAILING ADDRESS:

CITY/TOWN:

STATE/ZIP:

DATE:

ACCT.NO.

Program Charge
PC PER PERIOD

MEASURE NAME:

MEASURE NAME:

MEASURE NAME:

MEASURE NAME:

MEASURE COST	EST. MEASURE LIFE (YRS)	EST. ANNUAL SAVINGS	MAX REBATE AMOUNT
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text" value="\$0"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
\$0	0.00	\$0	\$ -

	MAXIMUM PDC TERM (MONTHS)	MAXIMUM MONTHLY PDC	PDC PAYMENT	PASS/FAIL w/o Rebate	MONTHLY PROGRAM CHARGE	REBATE REQUIRED	PASS/FAIL w/ Rebate
<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="\$0.00"/>	<input type="text" value="#DIV/0!"/>	<input type="text" value="#DIV/0!"/>	<input type="text" value="#DIV/0!"/>	<input type="text" value="#DIV/0!"/>	<input type="text" value="#DIV/0!"/>
<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="\$0.00"/>	<input type="text" value="#DIV/0!"/>	<input type="text" value="#DIV/0!"/>	<input type="text" value="#DIV/0!"/>	<input type="text" value="#DIV/0!"/>	<input type="text" value="#DIV/0!"/>
<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="\$0.00"/>	<input type="text" value="#DIV/0!"/>	<input type="text" value="#DIV/0!"/>	<input type="text" value="#DIV/0!"/>	<input type="text" value="#DIV/0!"/>	<input type="text" value="#DIV/0!"/>
<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="\$0.00"/>	<input type="text" value="#DIV/0!"/>	<input type="text" value="#DIV/0!"/>	<input type="text" value="#DIV/0!"/>	<input type="text" value="#DIV/0!"/>	<input type="text" value="#DIV/0!"/>
<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="\$0.00"/>	<input type="text" value="#DIV/0!"/>	<input type="text" value="#DIV/0!"/>	<input type="text" value="#DIV/0!"/>	<input type="text" value="#DIV/0!"/>	<input type="text" value="#DIV/0!"/>
MEASURES AS PACKAGE	<input type="text" value="0"/>	<input type="text" value="\$0.00"/>	<input type="text" value="#DIV/0!"/>	<input type="text" value="#DIV/0!"/>	<input type="text" value="#DIV/0!"/>	<input type="text" value="#DIV/0!"/>	<input type="text" value="#DIV/0!"/>

INSTRUCTIONS

1. Save this workbook as a new worksheet with the customer's name.
2. At the top, fill in building-specific information (Name, Address(es), Account Number) and the date.
3. In the center chart, list each major classification of measure and fill the Cost, Estimated Life, Estimated Savings and maximum rebate amount for each.
4. **Automatically, the worksheet will calculate the PDC charge and indicate whether the measure on its own or the package of measures can pass as a PAYS product. It will also compute the amount of rebate needed for the measure to pass and whether the measure will pass given the maximum rebate allowable.**
5. For customers who want the shortest possible payment term with a package of measures, reduce the input for "Est. Measure Life (YRS)" to the lowest number that allows the package to Pass. If there is only one measure, similarly, reduce the "Est. Measure Life (YRS)" for that measure.

NOTE: This spreadsheet assumes no interaction of savings from different measures. If savings from proposed measures are interactive, calculate the

interacted savings for the package of measures and fill it in at cell P16 by overriding cell protection.