

B.3 North Carolina Non-residential Lighting Systems and Controls Program 2015-2018

B.3.1 2015-2018 Annual Indicator Tables

NC- Non-Residential Lighting Systems & Controls Program		2015	2016	2015-2016	2017	2015-2017	2018	2015-2018
Category	Indicator	Total	Total ²	Program Total	Total	Program Total	Total	Program Total
O&M (\$)	Direct Rebate							
O&M (\$)	Direct Implementation							
O&M (\$)	Direct EM&V							
O&M (\$)	Indirect Other (Administrative)	\$3,511	\$11,956	\$15,468	\$9,940	\$25,407	\$14,072	\$39,480
Capital (\$)	Direct Implementation	\$0	\$0		\$0		\$0	
Costs (\$)	Total							
Costs (\$)	Planned							
Costs (\$)	Variance							
	Annual % of Planned	34%	109%	72%	73%	72%	62%	69%
Participants ¹	Total (Gross)	13	43	56	23	79	43	122
	Planned (Gross)	96	102	198	104	302	119	421
	Variance	-83	-59	-142	-81	-223	-76	-299
	Annual % of Planned (Gross)	14%	42%	28%	22%	26%	36%	29%
Installed kWh/year	Total Gross Deemed Savings (kWh/yr)	564,326	3,333,527	3,897,853	1,738,121	5,635,974	5,172,076	10,808,050
100%	Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0
	Realization Rate Adjusted Savings (kWh/yr)	564,326	3,333,527	3,897,853	1,738,121	5,635,974	5,172,076	10,808,050
70%	Net-To-Gross Adjustment (kWh/yr)	-169,298	-1,000,058	-1,169,356	-521,436	-1,690,792	-1,551,623	-3,242,415
	Net Adjusted Savings (kWh/yr)	395,028	2,333,469	2,728,497	1,216,685	3,945,182	3,620,453	7,565,635
	Planned Net Savings (kWh/yr)	1,752,864	1,619,973	3,372,837	2,220,165	5,593,002	2,661,116	8,254,118
	Annual % Toward Planned Net Savings (kWh)	23%	144%	81%	55%	71%	136%	92%
	Avg. Gross Savings Per Participant (kWh/yr)	43,410	77,524	69,605	75,570	71,341	120,281	88,591
	Avg. Net Savings Per Participant (kWh/yr)	30,387	54,267	48,723	52,899	49,939	84,197	62,013
Installed kW	Total Gross Demand Reduction (kW)	104.6	743.2	847.8	334.5	1,182.3	1,109.9	2,292.3
100%	Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Realization Rate Adjusted Gross Demand Reduction (kW)	104.6	743.2	847.8	334.5	1,182.3	1,109.9	2,292.3
70%	Net-To-Gross Adjustment (kW)	-31.4	-223.0	-254.3	-100.4	-354.7	-333.0	-687.7
	Net Adjusted Demand Reduction (kW)	73.2	520.2	593.5	234.2	827.6	777.0	1,604.6
	Planned Net Demand Reduction (kW)	490.2	274.7	764.9	366.7	1,131.6	479.0	1,610.6
	Annual % Toward Planned Net Reduction (kW)	15%	189%	78%	64%	73%	162%	100%
	Avg. Gross Demand Reduction Per Participant (kW)	8.0	17.3	15.1	14.5	15.0	25.8	18.8
	Avg. Net Demand Reduction Per Participant (kW)	5.6	12.1	10.6	10.2	10.5	18.1	13.2
Program Performance	Annual \$Admin. per Participant (Gross)	\$270	\$278	\$276	\$432	\$322	\$327	\$324
	Annual \$Admin. per kWh/year (Gross)	\$0.01	\$0.00	\$0.00	\$0.01	\$0.00	\$0.00	\$0.00
	Annual \$Admin. per kW (Gross)	\$34	\$16	\$18	\$30	\$21	\$12.68	\$17.22
	Annual \$EM&V per \$Total	6.4%	1.8%	2.9%	2.6%	2.8%	2.5%	2.7%
	Annual \$Rebate per Participant (Gross)	\$5,260	\$7,742	\$7,166	\$8,251	\$7,482	\$4,310	\$6,364

1. A participant is a unique account number.

2. The 2016 total gross deemed savings values reported in this table differs from values in the May 1, 2017 EM&V report, and have been refiled with the Commission. The adjustments totaled -481,137 kWh/year and 26 kW for 2016 reported savings. The adjustments accounts for corrections to STEP Manual version 7.0.0 issued on May 1, 2017, in section 9.1.1. The adjustment was to waste heat factors (WHFe and WHFd) applied to lighting fixtures installed in 2016, where the program participant building HVAC systems was assumed to be heat pump heating and cooling systems, rather than the previous assumption of AC cool and non-electric heat systems. This adjustment was made in response to requests by the North Carolina Public Staff Utilities Commission Re: Docket No. E-22, Sub 545, on October 23, 2017. It is reflected in STEP Manual version 8.0.0 in this EM&V report.

B.3.2 2018 Monthly Indicator Tables

NC- Non-Residential Lighting Systems & Controls Program		2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2015-2018
Category	Indicator	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec	Total	Program Total
O&M (\$)	Direct Rebate														
O&M (\$)	Direct Implementation														
O&M (\$)	Direct EM&V														
O&M (\$)	Indirect Other (Administrative)	\$189	\$2,398	\$2,568	\$32	\$633	\$886	\$4,365	\$301	\$226	\$1,263	\$263	\$948	\$14,072	\$39,480
Capital (\$)	Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Costs (\$)	Total														
Costs (\$)	Planned														
Costs (\$)	Variance														
	Annual % of Planned	1%	11%	23%	23%	26%	29%	49%	50%	51%	50%	58%	62%	62%	69%
Participants ¹	Total (Gross)	0	2	13	5	5	6	3	0	0	4	0	5	43	122
	Planned (Gross)	10	10	10	10	10	10	10	10	10	10	10	9	119	421
	Variance	-10	-8	3	-5	-5	-4	-7	-10	-10	-6	-10	-4	-76	-299
	Annual % of Planned (Gross)	0%	2%	13%	17%	21%	26%	29%	29%	29%	32%	32%	36%	36%	29%
Installed kWh/year	Total Gross Deemed Savings (kWh/yr)	0	468,314	295,925	33,123	35,611	72,691	773,119	0	0	135,925	0	3,357,367	5,172,076	10,808,050
	100% Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Realization Rate Adjusted Savings (kWh/yr)	0	468,314	295,925	33,123	35,611	72,691	773,119	0	0	135,925	0	3,357,367	5,172,076	10,808,050
	70% Net-To-Gross Adjustment (kWh/yr)	0	-140,494	-88,777	-9,937	-10,683	-21,807	-231,936	0	0	-40,778	0	-1,007,210	-1,551,623	-3,242,415
	Net Adjusted Savings (kWh/yr)	0	327,820	207,147	23,186	24,928	50,884	541,183	0	0	95,148	0	2,350,157	3,620,453	7,565,635
	Planned Net Savings (kWh/yr)	221,760	221,760	221,760	221,760	221,760	221,760	221,760	221,760	221,759	221,759	221,759	221,759	2,661,116	8,254,118
	Annual % Toward Planned Net Savings (kWh)	0%	12%	20%	21%	22%	24%	44%	44%	44%	48%	48%	136%	136%	92%
	Avg. Gross Savings Per Participant (kWh/yr)	N/A	234,157	22,763	6,625	7,122	12,115	257,706	N/A	N/A	33,981	N/A	671,473	120,281	88,591
	Avg. Net Savings Per Participant (kWh/yr)	N/A	163,910	15,934	4,637	4,986	8,481	180,394	N/A	N/A	23,787	N/A	470,031	84,197	62,013
	Installed kW	0.0	91.9	63.2	4.6	3.7	7.4	158.3	0.0	0.0	20.1	0.0	760.6	1,109.9	2,292.3
	100% Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70% Net-To-Gross Adjustment (kW)	Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	91.9	63.2	4.6	3.7	7.4	158.3	0.0	0.0	20.1	0.0	760.6	1,109.9	2,292.3
	Net Adjusted Demand Reduction (kW)	0.0	-27.6	-19.0	-1.4	-1.1	-2.2	-47.5	0.0	0.0	-6.0	0.0	-228.2	-333.0	-687.7
	Net Adjusted Demand Reduction (kW)	0.0	64.3	44.3	3.2	2.6	5.2	110.8	0.0	0.0	14.1	0.0	532.4	777.0	1,604.6
	Planned Net Demand Reduction (kW)	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	39.0	479.0	1,610.6
	Annual % Toward Planned Net Reduction (kW)	0%	13%	23%	23%	24%	25%	48%	48%	48%	51%	51%	162%	162%	100%
	Avg. Gross Demand Reduction Per Participant (kW)	N/A	45.9	4.9	0.9	0.7	1.2	52.8	N/A	N/A	5.0	N/A	152.1	25.8	18.8
	Avg. Net Demand Reduction Per Participant (kW)	N/A	32.2	3.4	0.6	0.5	0.9	36.9	N/A	N/A	3.5	N/A	106.5	18.1	13.2
	Program Performance														
	Annual Admin. per Participant (Gross)	N/A	\$1,294	\$344	\$259	\$233	\$216	\$326	\$334	\$341	\$338	\$345	\$327	\$327	\$324
	Annual Admin. per kWh/year (Gross)	N/A	\$0.01	\$0.01	\$0.01	\$0.01	\$0.01	\$0.01	\$0.01	\$0.01	\$0.01	\$0.01	\$0.00	\$0.00	\$0.00
	Annual Admin. per kW (Gross)	N/A	\$28	\$33	\$32	\$36	\$39	\$34	\$35	\$35	\$37	\$38	\$13	\$12.68	\$17.22
	Annual EM&V per \$ Total	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	1.3%	1.2%	1.2%	2.4%	2.3%	2.5%	2.5%	2.7%
	Annual SRebate per Participant (Gross)	N/A	\$18,144	\$4,765	\$3,767	\$3,162	\$2,867	\$4,592	\$4,592	\$4,592	\$4,487	\$4,487	\$4,310	\$4,310	\$6,364

B.4 North Carolina Non-residential Heating and Cooling Efficiency Program 2015-2018

B.4.1 2015-2018 Annual Indicator Tables

NC- Non-Residential Heating & Cooling Efficiency Program		2015	2016	2015-2016	2017	2015-2017	2018	2015-2018
Category	Indicator	Total	Total ²	Program Total	Total	Program Total	Total	Program Total
O&M (\$)	Direct Rebate							
O&M (\$)	Direct Implementation							
O&M (\$)	Direct EM&V							
O&M (\$)	Indirect Other (Administrative)	\$1,360	\$1,610	\$2,970	\$2,353	\$5,323	\$4,390	\$9,713
Costs (\$)	Total							
Costs (\$)	Planned							
Costs (\$)	Variance							
	Annual % of Planned	32%	44%	38%	49%	42%	61%	47%
Participants ¹	Total (Gross)	3	6	9	3	12	3	15
	Planned (Gross)	48	52	100	53	153	53	206
	Variance	-45	-46	-91	-50	-141	-50	-191
	Annual % of Planned (Gross)	6%	12%	9%	6%	8%	6%	7%
Installed kWh/year	Total Gross Deemed Savings (kWh/yr)	91,144	289,500	380,644	82,971	463,615	225,775	689,390
100%	Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0
	Realization Rate Adjusted Savings (kWh/yr)	91,144	289,500	380,644	82,971	463,615	225,775	689,390
70%	Net-To-Gross Adjustment (kWh/yr)	-27,343	-86,850	-114,193	-24,891	-139,085	-67,732	-206,817
	Net Adjusted Savings (kWh/yr)	63,801	202,650	266,451	58,080	324,531	158,042	482,573
	Planned Net Savings (kWh/yr)	606,768	1,619,973	2,226,741	2,563,872	4,790,614	2,043,754	6,834,368
	Annual % Toward Planned Net Savings (kWh)	11%	13%	12%	2%	7%	8%	7%
	Avg. Gross Savings Per Participant (kWh/yr)	30,381	48,250	42,294	27,657	38,635	75,258	45,959
	Avg. Net Savings Per Participant (kWh/yr)	21,267	33,775	29,606	19,360	27,044	52,681	32,172
Installed kW	Total Gross Demand Reduction (kW)	26.9	93.2	120.1	-40.3	79.9	84.7	164.5
100%	Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Realization Rate Adjusted Gross Demand Reduction(kW)	26.9	93.2	120.1	-40.3	79.9	84.7	164.5
70%	Net-To-Gross Adjustment (kW)	-8.1	-28.0	-36.0	12.1	-24.0	-25.4	-49.4
	Net Adjusted Demand Reduction (kW)	18.8	65.3	84.1	-28.2	55.9	59.3	115.2
	Planned Net Demand Reduction (kW)	154.2	274.7	428.9	1,042.3	1,471.1	497.0	1,968.1
	Annual % Toward Planned Net Reduction (kW)	12.2%	23.8%	19.6%	-2.7%	3.8%	11.9%	5.9%
	Avg. Gross Demand Reduction Per Participant (kW)	9.0	15.5	13.3	-13.4	6.7	28.2	11.0
	Avg. Net Demand Reduction Per Participant (kW)	6.3	10.9	9.3	-9.4	4.7	19.8	7.7
Program Performance	Annual \$Admin. per Participant (Gross)	\$453	\$268	\$330	\$784	\$444	\$1,463	\$648
	Annual \$Admin. per kWh/year (Gross)	\$0.01	\$0.01	\$0.01	\$0.03	\$0.01	\$0.02	\$0.01
	Annual \$Admin. per kW (Gross)	\$51	\$17	\$25	-\$58	\$67	\$52	\$59
	Annual \$EM&V per \$Total	14%	15%	14%	15%	14%	11%	13%
	Annual \$Rebate per Participant (Gross)	\$2,728	\$3,404	\$3,179	\$6,996	\$4,133	\$11,613	\$5,629

1. A participant is a unique account number.
2. The 2016 total gross deemed savings values reported in this table differs from values in the May 1, 2017 EM&V report, and have been refiled with the Commission. The adjustments totaled -22,904 kWh/year and 0 kW for 2016 reported savings. The adjustments accounts for corrections to STEP Manual version 7.0.0 issued on May 1, 2017, in section 10. The adjustment was made to full load heating hours (FLHheat) in Tables 90 and 91 to be consistent with those in the Mid-Atlantic TRM v 6, in response to requests by the North Carolina Public Staff Utilities Commission Re: Docket No. E-22, Sub 545, on October 23, 2017. This affected multiple non-residential HVAC measures (e.g. heat pumps, variable refrigerant flow, mini split systems) that reference Table 90 and 91, in multiple non-residential programs. This adjustment is reflected in STEP Manual version 8.0.0 in this EM&V report.

B.4.2 2018 Monthly Indicator Tables

NC- Non-Residential Heating & Cooling Efficiency Program		2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2015-2018
Category	Indicator	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec	Total	Program Total
O&M (\$)	Direct Rebate														
O&M (\$)	Direct Implementation														
O&M (\$)	Direct EM&V														
O&M (\$)	Indirect Other (Administrative)	\$142	\$108	\$462	\$2,426	\$319	\$87	\$91	\$125	\$118	\$356	\$107	\$49	\$4,390	\$9,713
Costs (\$)	Total														
Costs (\$)	Planned														
Costs (\$)	Variance														
	Annual % of Planned	2%	3%	10%	44%	48%	49%	51%	52%	54%	59%	61%	61%	61%	47%
Participants ¹	Total (Gross)	0	0	1	2	0	0	0	0	0	0	0	0	3	15
	Planned (Gross)	5	5	4	4	4	4	4	4	4	4	4	4	53	206
	Variance	-5	-5	-3	-2	-4	-4	-4	-4	-4	-4	-4	-4	-50	-191
	Annual % of Planned (Gross)	0%	0%	2%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	7%
Installed kWh/year	Total Gross Deemed Savings (kWh/yr)	0	0	76,033	149,741	0	0	0	0	0	0	0	0	225,775	689,390
100%	Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Realization Rate Adjusted Savings (kWh/yr)	0	0	76,033	149,741	0	0	0	0	0	0	0	0	225,775	689,390
70%	Net-To-Gross Adjustment (kWh/yr)	0	0	-22,810	-44,922	0	0	0	0	0	0	0	0	-67,732	-206,817
	Net Adjusted Savings (kWh/yr)	0	0	53,223	104,819	0	0	0	0	0	0	0	0	158,042	482,573
	Planned Net Savings (kWh/yr)	170,313	170,313	170,313	170,313	170,313	170,313	170,313	170,313	170,313	170,313	170,312	170,312	2,043,754	6,834,368
	Annual % Toward Planned Net Savings (kWh)	0%	0%	3%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	7%
	Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	76,033	74,871	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	75,258	45,959
	Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	53,223	52,409	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	52,681	32,172
Installed kW	Total Gross Demand Reduction (kW)	0.0	0.0	5.4	79.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	84.7	164.5
100%	Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Realization Rate Adjusted Gross Demand Reduction(kW)	0.0	0.0	5.4	79.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	84.7	164.5
70%	Net-To-Gross Adjustment (kW)	0.0	0.0	-1.6	-23.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-25.4	-49.4
	Net Adjusted Demand Reduction (kW)	0.0	0.0	3.8	55.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	59.3	115.2
	Planned Net Demand Reduction (kW)	42.0	42.0	42.0	42.0	42.0	41.0	41.0	41.0	41.0	41.0	41.0	41.0	497.0	1,968.1
	Annual % Toward Planned Net Reduction (kW)	0.0%	0.0%	0.8%	11.9%	11.9%	11.9%	11.9%	11.9%	11.9%	11.9%	11.9%	11.9%	11.9%	5.9%
	Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	5.4	39.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	28.2	11.0
	Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	3.8	27.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	19.8	7.7
Program Performance	Annual SAdmin. per Participant (Gross)	N/A	N/A	\$712	\$1,046	\$1,152	\$1,181	\$1,212	\$1,253	\$1,293	\$1,411	\$1,447	\$1,463	\$1,463	\$648
	Annual SAdmin. per kWh/year (Gross)	N/A	N/A	\$0.01	\$0.01	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.01
	Annual SAdmin. per kW (Gross)	N/A	N/A	\$131	\$37	\$41	\$42	\$43	\$44	\$46	\$50	\$51	\$52	\$52	\$59
	Annual SEM&V per \$ Total	0%	0%	0%	0%	5%	5%	5%	5%	5%	10%	10%	11%	11%	13%
	Annual SRebate per Participant (Gross)	N/A	N/A	\$5,720	\$11,613	\$11,613	\$11,613	\$11,613	\$11,613	\$11,613	\$11,613	\$11,613	\$11,613	\$11,613	\$5,629

B.5 North Carolina Non-residential Window Film Program 2015-2018

B.5.1 2015-2018 Annual Indicator Tables

NC- Non-Residential Window Film Program		2015	2016	2017	2018	2015-2018
Category	Indicator	Total	Total	Total	Total	Program Total
O&M (\$)	Direct Rebate					
O&M (\$)	Direct Implementation					
O&M (\$)	Direct EM&V					
O&M (\$)	Indirect Other (Administrative)	\$851	\$799	\$870	\$984	\$3,504
Capital (\$)	Direct Implementation	\$0	\$0	\$0	\$0	
Costs (\$)	Total					
Costs (\$)	Planned					
Costs (\$)	Variance					
	Annual % of Planned	30%	23%	17%	12%	19%
Participants ¹	Total Participants	0	0	0	1	1
	Total Square Feet	0	0	0	402	402
	Planned Square Feet	48,000	76,742	91,659	95,900	312,301
	Variance	-48,000	-76,742	-91,659	-95,498	-311,899
	Annual % of Planned (Gross)	0%	0%	0%	0%	0%
Square feet	Total Square Feet	0	0	0	402	402
	North Facing	0	0	0	0	0
	East Facing	0	0	0	402	402
	West Facing	0	0	0	0	0
	South Facing	0	0	0	0	0
Installed kWh/year	Total Gross Deemed Savings (kWh/yr)	0	0	0	4,516	4,516
100%	Realization Rate Adjustment (kWh/yr)	0	0	0	0	0
	Realization Rate Adjusted Savings (kWh/yr)	0	0	0	4,516	4,516
80%	Net-To-Gross Adjustment (kWh/yr)	0	0	0	-903	-903
	Net Adjusted Savings (kWh/yr)	0	0	0	3,613	3,613
	Planned Net Savings (kWh/yr)	864	1,064,075	1,016,658	691,176	2,772,773
	Annual % Toward Planned Net Savings (kWh)	0%	0%	0%	1%	0%
	Avg. Gross Savings Per Participant (kWh/yr)			N/A	4,516	4,516
	Avg. Gross Savings Per Square Foot (kWh/yr)			N/A	11	11
	Avg. Net Savings Per Participant (kWh/yr)			N/A	3612.77	3612.77
	Avg. Net Savings Per Square Foot (kWh/yr)			N/A	9	8.99
Installed kW	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.7	0.7
100%	Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0
	Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.7	0.7
80%	Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	-0.1	-0.1
	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.6	0.6
	Planned Net Demand Reduction (kW)	0.2	973.7	915.3	635.0	2,524.2
	Annual % Toward Planned Net Reduction (kW)	0%	0%	0%	0.1%	0.02%
	Avg. Gross Demand Reduction Per Participant (kW)			N/A	0.7	0.7
	Avg. Gross Demand Reduction Per Square Foot (kW)			N/A	0.002	0.002
	Avg. Net Demand Reduction Per Participant (kW)			N/A	0.6	0.6
	Avg. Net Demand Reduction Per Square Foot (kW)			N/A	0.001	0.001
Program Performance	Annual \$Admin. per Participant (Gross)			N/A	\$984.4	\$3,504
	Annual \$Admin. per kWh/year (Gross)			N/A	\$0.22	\$0.78
	Annual \$Admin. per kW (Gross)			N/A	\$1,337.1	\$4,760
	Annual \$EM&V per \$Total	18%	29%	25%	29%	25%
	Annual \$Rebate per Participant (Gross)			N/A	\$342	\$342

1. A participant is a unique account number.

B.5.2 2018 Monthly Indicator Tables

NC- Non-Residential Window Film Program		2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2015-2018
Category	Indicator	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec	Total	Program Total	
O&M (\$)	Direct Relate															
O&M (\$)	Direct Implementation															
O&M (\$)	Direct EM&V															
O&M (\$)	Indirect Other (Administrative)	\$58	\$55	\$62	\$62	\$197	\$41	\$45	\$96	\$73	\$186	\$62	\$46	\$984	\$3,504	
Capital (\$)	Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Costs (\$)	Total															
Costs (\$)	Planned															
Costs (\$)	Variance															
	Annual % of Planned	1%	1%	2%	3%	5%	6%	6%	8%	9%	11%	12%	12%	12%	19%	
Participants ¹	Total Participants	0	0	0	0	0	0	0	1	0	0	0	0	1	1	
	Total Square Feet	0	0	0	0	0	0	0	402	0	0	0	0	402	402	
	Planned Square Feet	7,992	7,992	7,992	7,992	7,992	7,992	7,992	7,992	7,991	7,991	7,991	7,991	95,900	312,301	
	Variance	-7,992	-7,992	-7,992	-7,992	-7,992	-7,992	-7,992	-7,990	-7,991	-7,991	-7,991	-7,991	-95,498	-311,899	
	Annual % of Planned (Gross)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Square feet	Total Square Feet	0	0	0	0	0	0	0	402	0	0	0	0	402	402	
	North Facing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	East Facing	0	0	0	0	0	0	0	402	0	0	0	0	402	402	
	West Facing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	South Facing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Installed kWh/year	Total Gross Deemed Savings (kWh/yr)	0	0	0	0	0	0	0	4,516	0	0	0	0	4,516	4,516	
	100% Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Realization Rate Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	4,516	0	0	0	0	4,516	4,516	
	80% Net-To-Gross Adjustment (kWh/yr)	0	0	0	0	0	0	0	-903	0	0	0	0	-903	-903	
	Net Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	3,613	0	0	0	0	3,613	3,613	
	Planned Net Savings (kWh/yr)	57,598	57,598	57,598	57,598	57,598	57,598	57,598	57,598	57,598	57,598	57,598	57,598	691,176	2,772,773	
	Annual % Toward Planned Net Savings (kWh)	0%	0%	0%	0%	0%	0%	0%	1%	1%	1%	1%	1%	1%	0%	
	Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4,516	N/A	N/A	N/A	N/A	N/A	4,516	4,516
	Avg. Gross Savings Per Square Foot (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11	N/A	N/A	N/A	N/A	11	11
	Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3,613	N/A	N/A	N/A	N/A	N/A	3612.77	3612.77
	Avg. Net Savings Per Square Foot (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9.0	N/A	N/A	N/A	N/A	9	8.99	
Installed kW	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.7	0.7	
	100% Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.7	0.7	
	80% Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	-0.1	-0.1	
	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.6	0.6	
	Planned Net Demand Reduction (kW)	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0	53.0	52.0	635.0	2,524.2	
	Annual % Toward Planned Net Reduction (kW)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.02%	
	Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.7	N/A	N/A	N/A	N/A	0.7	0.7
	Avg. Gross Demand Reduction Per Square Foot (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.002	N/A	N/A	N/A	N/A	0.002	0.002
	Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.6	N/A	N/A	N/A	N/A	0.6	0.6
	Avg. Net Demand Reduction Per Square Foot (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00	N/A	N/A	N/A	0.001	0.001	
Program Performance	Annual \$Admin. per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$617.3	\$690.0	\$876.3	\$938.3	\$984.4	\$984.4	\$3,504	
	Annual \$Admin. per kWh/year (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$0.14	\$0.15	\$0.19	\$0.21	\$0.22	\$0.22	\$0.78	
	Annual \$Admin. per kW (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$839	\$937	\$1,190	\$1,274	\$1,337	\$1,337.1	\$4,760	
	Annual \$EM&V per \$Total	0%	0%	0%	0%	30%	27%	25%	21%	19%	28%	20%	29%	29%	25%	
	Annual \$Relate per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$342	\$342	\$342	\$342	\$342	\$342	\$342

B.6 North Carolina Non-residential Small Business Improvement Program 2017-2018

B.6.1 2017-2018 Annual Indicator Tables

NC- Small Business Improvement Program		2017 Total	2018 Total	2017-2018 Program Total
Category	Indicator			
O&M (\$)	Direct Rebate			
O&M (\$)	Direct Implementation			
O&M (\$)	Direct EM&V			
O&M (\$)	Indirect Other (Administrative)	\$3,870	\$10,216	\$14,086
Costs (\$)	Total			
Costs (\$)	Planned			
Costs (\$)	Variance			
	Annual % of Planned	28.0%	43.0%	36.2%
Participants ¹	Total (Gross)	7	36	43
	Planned (Gross)	42	53	95
	Variance	-35	-17	-52
	Annual % of Planned (Gross)	16.7%	67.9%	45.3%
Installed kWh/year	Total Gross Deemed Savings (kWh/yr)	166,507	1,000,716	1,167,222
100%	Realization Rate Adjustment (kWh/yr)	0	0	0
	Realization Rate Adjusted Savings (kWh/yr)	166,507	1,000,716	1,167,222
93%	Net-To-Gross Adjustment (kWh/yr)	-11,655	-70,050	-81,706
	Net Adjusted Savings (kWh/yr)	154,851	930,665	1,085,517
	Planned Net Savings (kWh/yr)	288,232	384,890	673,122
	Annual % Toward Planned Net Savings (kWh)	53.7%	241.8%	161.3%
	Avg. Gross Savings Per Participant (kWh/yr)	23,787	27,798	27,145
	Avg. Net Savings Per Participant (kWh/yr)	22,122	25,852	25,245
Installed kW	Total Gross Demand Reduction (kW)	32.6	219.1	251.8
100%	Realization Rate Adjustment (kW)	0.0	0.0	0.0
	Realization Rate Adjusted Gross Demand Reduction (kW)	32.6	219.1	251.8
93%	Net-To-Gross Adjustment (kW)	-2.3	-15.3	-17.6
	Net Adjusted Demand Reduction (kW)	30.3	203.8	234.1
	Planned Net Demand Reduction (kW)	43.7	76.0	119.7
	Annual % Toward Planned Net Reduction (kW)	69.4%	268.2%	195.6%
	Avg. Gross Demand Reduction Per Participant (kW)	4.7	6.1	5.9
	Avg. Net Demand Reduction Per Participant (kW)	4.3	5.7	5.4
Program Performance	Annual \$Admin. per Participant (Gross)	\$553	\$284	\$328
	Annual \$Admin. per kWh/year (Gross)	\$0.02	\$0.01	\$0.01
	Annual \$Admin. per kW (Gross)	\$119	\$47	\$56
	Annual \$EM&V per \$Total	7.4%	3.9%	5.1%
	Annual \$Rebate per Participant (Gross)	\$3,778	\$2,791	\$2,951

1. A participant is a unique account number.

B.6.2 2018 Monthly Indicator Tables

NC-Small Business Improvement Program		2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2017-2018
Category	Indicator	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec	Total	Program Total
O&M (\$)	Direct Rebate														
O&M (\$)	Direct Implementation														
O&M (\$)	Direct EM&V														
O&M (\$)	Indirect Other (Administrative)	\$302	\$664	\$516	\$519	\$1,652	\$1,959	\$1,003	\$355	\$296	\$1,984	\$373	\$591	\$10,216	\$14,086
Costs (\$)	Total														
Costs (\$)	Planned														
Costs (\$)	Variance														
	Annual % of Planned	1.3%	4.1%	6.2%	8.4%	15.4%	23.6%	27.9%	29.4%	30.6%	39.0%	40.6%	43.0%	43.0%	36.2%
Participants ¹	Total (Gross)	0	1	1	1	3	9	9	0	0	11	0	1	36	43
	Planned (Gross)	5	5	5	5	5	4	4	4	4	4	4	4	53	95
	Variance	-5	-4	-4	-4	-2	5	5	-4	-4	7	-4	-3	-17	-52
	Annual % of Planned (Gross)	0.0%	1.9%	3.8%	5.7%	11.3%	28.3%	45.3%	45.3%	45.3%	66.0%	66.0%	67.9%	67.9%	45.3%
Installed kWh/year	Total Gross Deemed Savings (kWh/yr)	0	38,231	22,526	34,105	226,431	220,652	105,303	0	0	326,566	0	26,901	1,000,716	1,167,222
100%	Realization Rate Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Realization Rate Adjusted Savings (kWh/yr)	0	38,231	22,526	34,105	226,431	220,652	105,303	0	0	326,566	0	26,901	1,000,716	1,167,222
93%	Net-To-Gross Adjustment (kWh/yr)	0	-2,676	-1,577	-2,387	-15,850	-15,446	-7,371	0	0	-22,800	0	-1,883	-70,050	-81,706
	Net Adjusted Savings (kWh/yr)	0	35,555	20,949	31,718	210,581	205,206	97,932	0	0	303,766	0	25,018	930,665	1,085,517
	Planned Net Savings (kWh/yr)	32,075	32,075	32,074	32,074	32,074	32,074	32,074	32,074	32,074	32,074	32,074	32,074	384,890	673,122
	Annual % Toward Planned Net Savings (kWh)	0.0%	9.2%	14.7%	22.9%	77.6%	130.9%	156.4%	156.4%	156.4%	235.3%	235.3%	241.8%	241.8%	161.3%
	Avg. Gross Savings Per Participant (kWh/yr)	N/A	38,231	22,526	34,105	75,477	24,517	11,700	N/A	N/A	29,688	N/A	26,901	27,798	27,145
	Avg. Net Savings Per Participant (kWh/yr)	N/A	35,555	20,949	31,718	70,194	22,801	10,881	N/A	N/A	27,610	N/A	25,018	25,852	25,245
Installed kW	Total Gross Demand Reduction (kW)	0.0	4.1	7.4	7.9	53.1	48.7	20.7	0.0	0.0	72.3	0.0	4.9	219.1	251.8
100%	Realization Rate Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	4.1	7.4	7.9	53.1	48.7	20.7	0.0	0.0	72.3	0.0	4.9	219.1	251.8
93%	Net-To-Gross Adjustment (kW)	0.0	-0.3	-0.5	-0.6	-3.7	-3.4	-1.4	0.0	0.0	-5.1	0.0	-0.3	-15.3	-17.6
	Net Adjusted Demand Reduction (kW)	0.0	3.8	6.9	7.4	49.4	45.2	19.2	0.0	0.0	67.2	0.0	4.6	203.8	234.1
	Planned Net Demand Reduction (kW)	7.0	7.0	7.0	7.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	76.0	119.7
	Annual % Toward Planned Net Reduction (kW)	0.0%	5.0%	14.1%	23.8%	88.8%	148.4%	173.7%	173.7%	173.7%	262.1%	262.1%	268.2%	268.2%	195.6%
	Avg. Gross Demand Reduction Per Participant (kW)	N/A	4.1	7.4	7.9	17.7	5.4	2.3	N/A	N/A	6.6	N/A	4.9	6.1	5.9
	Avg. Net Demand Reduction Per Participant (kW)	N/A	3.8	6.9	7.4	16.5	5.0	2.1	N/A	N/A	6.1	N/A	4.6	5.7	5.4
Program Performance	Annual \$Admin. per Participant (Gross)	N/A	\$967	\$741	\$667	\$609	\$374	\$276	\$290	\$303	\$264	\$275	\$284	\$284	\$328
	Annual \$Admin. per kWh/year (Gross)	N/A	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0.01	\$0.01
	Annual \$Admin. per kW (Gross)	N/A	\$235	\$129	\$103	\$50	\$46	\$47	\$49	\$51	\$43	\$45	\$47	\$47	\$56
	Annual \$EM&V per \$Total	0.0%	0.0%	0.0%	0.0%	5.6%	3.7%	3.1%	2.9%	2.8%	3.5%	3.4%	3.9%	3.9%	5.1%
	Annual \$Rebate per Participant (Gross)	N/A	\$6,136	\$4,928	\$4,585	\$5,383	\$3,935	\$2,954	\$2,954	\$2,954	\$2,773	\$2,773	\$2,791	\$2,791	\$2,951

B.7 North Carolina Non-residential Prescriptive Program 2018

NC- Nonresidential Prescriptive Program		2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018-2019
Category	Indicator	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total	Program Total	
O&M (\$)	Direct Rebate															
O&M (\$)	Direct Implementation															
O&M (\$)	Direct DM&V															
O&M (\$)	Indirect Other (Administrative)	\$313	\$313	\$313	\$313	\$486	\$313	\$313	\$318	\$335	\$606	\$4,710	\$2,341	\$10,172	\$10,172	
Costs (\$)	Total															
Costs (\$)	Planned															
Costs (\$)	Variance															
	Annual % of Planned	1%	3%	4%	0%	3%	9%	10%	12%	13%	10%	35%	45%	45%	45%	
Participants ¹	Total (Gross)	0	0	0	0	0	0	0	0	0	0	11	10	21	40	
	Planned (Gross)	3	3	3	3	3	2	2	2	2	2	2	2	29	29	
	Variance	-3	-3	-3	-3	-3	-2	-2	-2	-2	-2	9	8	-8	11	
	Annual % of Planned (Gross)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	38%	72%	72%	138%	
Installed kWh/year	Total Gross Deemed Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	160,379	61,400	221,779	372,642	
	100%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Realization Rate Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	160,379	61,400	221,779	372,642	
	85%	0	0	0	0	0	0	0	0	0	0	-24,057	-9,210	-33,267	-55,896	
	Net-To-Gross Adjustment (kWh/yr)	0	0	0	0	0	0	0	0	0	0	136,322	52,190	188,512	316,745	
	Net Adjusted Savings (kWh/yr)	0	0	0	0	0	0	0	0	0	0	136,322	52,190	188,512	316,745	
	Planned Net Savings (kWh/yr)	151,902	151,902	151,902	151,902	151,902	151,902	151,902	151,902	151,902	151,902	151,902	151,902	1,822,814	1,822,814	
	Annual % Toward Planned Net Savings (kWh)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	7%	10%	10%	175%	
	Avg. Gross Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	14,580	6,140	10,561	9,316	
	Avg. Net Savings Per Participant (kWh/yr)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	12,399	5,219	8,977	7,919	
Installed kW	Total Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.3	7.6	25.3	42.4	
	100%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Realization Rate Adjusted Gross Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.3	7.6	25.3	42.4	
	85%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.7	-1.1	-3.8	-6.4	
	Net-To-Gross Adjustment (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.3	6.0	21.5	36.1	
	Net Adjusted Demand Reduction (kW)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.3	6.0	21.5	36.1	
	Planned Net Demand Reduction (kW)	24.0	25.0	25.0	25.0	25.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	292.0	292.0	
	Annual % Toward Planned Net Reduction (kW)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.3%	7.4%	7.4%	17.6%	
	Avg. Gross Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.7	0.7	1.2	1.1	
	Avg. Net Demand Reduction Per Participant (kW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.4	0.6	1.0	0.9	
Program Performance	Annual \$ Admin. per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$712	\$484	\$484	\$254	
	Annual \$ Admin. per kWh/year (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$0.05	\$0.05	\$0.05	\$0.03	
	Annual \$ Admin. per kW (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$429	\$403	\$403	\$240	
	Annual \$ DM&V per \$ Total	0%	0%	0%	0%	9%	8%	7%	6%	5%	12%	5%	5%	5%	5%	
	Annual \$ Rebate per Participant (Gross)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$5,429	\$3,919	\$3,919	\$2,857	

1. A participant is a unique account number

A.7.2 2018 Monthly Indicator Tables

VA - Residential AC Cycling Program		2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2010-2018	
Category	Indicator	Jun	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Program Total	
O&M (\$)	Direct Relate															
O&M (\$)	Direct Implementation															
O&M (\$)	Direct EM&V															
O&M (\$)	Indirect Other (Administrative)	\$11,934	\$9,739	\$10,142	\$10,084	\$11,533	\$64,972	\$64,737	\$63,721	\$61,373	\$10,309	\$866	\$13,971	\$333,382	\$4,243,496	
Capital (\$)	Direct Implementation															
Costs (\$)	Total															
Costs (\$)	Planned															
Costs (\$)	Variance															
	Cum. % toward planned total	3%	5%	7%	9%	12%	25%	38%	52%	64%	66%	67%	70%	70%	75%	
Participants	Total (Cumulative @ End of Month)	149,449	149,667	149,776	149,846	150,285	150,607	150,770	151,129	151,222	151,361	151,611	151,798	151,798	151,798	
	Removals (Uninstalled) / Deactivations	-60,514	-61,041	-61,457	-62,725	-63,489	-65,385	-66,815	-68,109	-69,211	-69,892	-70,629	-71,171	-71,171	-71,171	
	Opt-outs	30	30	30	30	30	29	29	28	28	28	28	27	27	418	
	Adjusted Participants (Cum.)	88,935	88,626	88,319	87,121	86,796	85,222	83,955	83,020	82,011	81,469	80,982	80,627	80,627	80,209	
	0% Net to gross adjustment (Cum.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	96% In Service Rate Adjustment (Cum.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Net Participation (Cum.)	88,935	88,626	88,319	87,121	86,796	85,222	83,955	83,020	82,011	81,469	80,982	80,627	80,627	80,209	
	Planned (Cum.)	90,267	90,267	90,267	90,267	90,267	90,267	90,267	90,267	90,267	90,267	90,267	90,267	90,267	90,267	
	Variance (Cum.)	-1,332	-1,641	-1,948	-3,146	-3,471	-5,045	-6,312	-7,247	-8,256	-8,798	-9,285	-9,640	-9,640	-10,058	
	Cum. % toward planned total (Net basis)	99%	98%	98%	97%	96%	94%	93%	92%	91%	90%	90%	89%	89%	89%	
	Removal (Uninstalled) / Deactivation Rate	-0.65%	-0.59%	-0.47%	-1.46%	-0.88%	-2.22%	-1.70%	-1.56%	-1.34%	-0.84%	-0.91%	-0.67%	-1.11%	-0.87%	
	Average % Opt-outs (rate)	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.19%	
	Realization Rate	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	98%	
		Connected Load kW	257,755	257,881	254,998	253,405	250,036	247,223	244,494	242,943	241,408	240,188	239,793	239,199	247,443	230,635
Ex-Ante Estimated kW		0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	
Connected Load Per Participant (kW)		2.90	2.91	2.89	2.91	2.88	2.90	2.91	2.93	2.94	2.95	2.96	2.97	3.07	3.00	
kW Potential	Peak Shaving Potential kW - Gross Participants	93,762.7	93,899.4	93,967.8	94,011.7	94,287.2	94,489.2	94,591.4	94,816.7	94,875.0	94,962.2	95,119.1	95,236.4	95,236.4	95,236.4	
	Removed (Uninstalled) / Deactivated Peak Shaving Potential kW	-37,965.8	-38,296.5	-38,557.4	-39,353.0	-39,832.3	-41,021.8	-41,919.0	-42,730.8	-43,422.2	-43,849.5	-44,311.9	-44,651.9	-44,651.9	-44,651.9	
	Less Opt-outs (kW)	19.0	18.9	18.8	18.6	18.5	18.2	17.9	17.7	17.5	17.4	17.3	17.2	17.2	261.9	
	Dispatchable Peak Shaving Potential - Total kW	55,777.9	55,584.1	55,391.5	54,640.2	54,436.3	53,449.2	52,654.5	52,068.1	51,435.3	51,095.4	50,789.9	50,567.3	50,567.3	50,322.6	
	0% Less Free Ridership Factor (Cum.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	96% In Service Rate Adjustment (Cum.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Adjustment for Realization Rate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Net Demand (Cum.)	55,778	55,584	55,392	54,640	54,436	53,449	52,655	52,068	51,435	51,095	50,790	50,567	50,567	50,323	
	Planned Demand (Cum.)	61,419	61,419	61,419	61,419	61,419	61,419	61,419	61,419	61,419	61,419	61,419	61,419	61,419	61,419	
	Cum. % toward planned total (Net basis)	91%	90%	90%	89%	89%	87%	86%	85%	84%	83%	83%	82%	82%	82%	
	Dispatchable Peak Shaving Potential kW per Participant	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	
	Program Performance	Cum. \$Admin. per Cum. Participant	\$26	\$26	\$26	\$26	\$26	\$27	\$27	\$28	\$28	\$28	\$28	\$28	\$28	\$28
		Cum. \$Admin. per Cum. Gross kW	\$40	\$40	\$40	\$40	\$40	\$41	\$41	\$42	\$42	\$43	\$43	\$43	\$43	\$43
		Cum. \$EM&V per Cum. \$Total	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Cum. \$Rebate per Cum. Participant		\$140	\$140	\$140	\$140	\$140	\$145	\$151	\$156	\$161	\$161	\$160	\$159	\$159	\$159	

A.8 Virginia Non-residential Distributed Generation Program 2012-2018

A.8.1 2012-2018 Annual Indicator Tables

VA - Non-Residential Distributed Generation Program		2012	2013	2014	2015	2016	2017	2018	2012 - 2018
Category	Indicator	Total	Total	Total	Total	Total	Total	Total	Program Total
O&M (\$)	Direct Rebate								
O&M (\$)	Direct Implementation								
O&M (\$)	Direct EM&V								
O&M (\$)	Indirect Other (Administrative)	\$45,196	\$70,742	\$55,136	\$14,914	\$17,395	\$20,476	\$31,507	\$255,366
Capital (\$)	Direct Implementation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Costs (\$)	Total								
Costs (\$)	Planned								
Costs (\$)	Variance								
	Cum. % toward planned total	21%	29%	55%	57%	67%	77%	64%	45%
Participants ¹	Total (Cumulative @ End of Month)	19.0	19.4	18.6	5.9	6.5	6.1	6.1	6.1
	Planned (Cum.)	23.0	28.0	35.0	13.0	7.0	7.4	8.1	8.1
	Variance (Cum.)	-4.0	-8.6	-16.4	-7.1	-0.5	-1.3	-2.0	-2.0
	Cum % Toward Planned Total (Net basis)	83%	69%	53%	45%	93%	82%	75%	75%
kW Potential	Total (Cumulative @ End of Month)	19,040	19,410	18,580	5,875	5,740	5,548	6,130	6,130
	Realization Rate	70%	77%	78%	93%	106%	108%	97%	97%
	Adjustment for Realization Rate	-2,989	-3,300	-4,088	-411	344	444	-184	-184
	Net kW (Cum.)	16,051	16,110	14,492	5,457	4,348	5,992	5,946	5,946
	Planned (Cum.)	23,000	28,000	35,000	13,000	7,000	7,394	8,149	8,149
	Cum % Toward Planned Total (Net kW)	70%	58%	41%	42%	62%	86%	73%	73%
	Avg. per Net Participant (Net kW)	843	830	780	929	669	982	970	858
Program Performance	Annual Cum. \$Admin. per Cum. Participant	\$2,374	\$5,973	\$9,207	\$9,294	\$9,589	\$3,357	\$5,140	\$5,140
	Annual Cum. \$Admin. per Cum. Gross kW	\$2	\$6	\$9	\$9	\$10	\$3	\$5	\$5
	Cum. SEM&V per Cum. \$Total	3.3%	7.5%	8.8%	9.5%	11.6%	12.5%	13.3%	13.3%
	Cum. \$Rebate per Cum. Participant	\$21,366	\$47,494	\$99,549	\$376,393	\$418,435	\$513,179	\$577,089	\$577,089

1. A participant is equal to one megawatt (MW) available to Dominion for dispatch through the Commercial Distributed Generation program.

B.9 North Carolina Residential Lighting Program 2011-2012¹²

NC- Residential Lighting Program		2011	2012	2011-2012
Category	Indicator	Total	Total	Program Total
O&M (\$)	Direct Rebate			
O&M (\$)	Direct Implementation			
O&M (\$)	Direct EM&V			
O&M (\$)	Indirect Other (Administrative)	\$5,847	\$1,066	\$6,913
Costs (\$)	Total			
Costs (\$)	Planned			
Costs (\$)	Variance			
	Cum. % toward planned total	61.6%	46.7%	59.5%
Participants	Total bulbs (Gross)	37,120	0	37,120
	Planned (Gross)	127,975		127,975
	Variance	-90,855	0	-90,855
	Cum % toward planned total (Gross)	29.0%		29.0%
Installed kWh/year	Total (Gross)	1,882,829	0	1,882,829
	84% Realization Rate Adjustment	-301,253	0	-301,253
	Adjusted Gross Savings	1,581,577	0	1,581,577
	65% Net-To-Gross Adjustment	-553,552	0	-553,552
	Net Adjusted Savings	1,028,025	0	1,028,025
	Planned (Net)	3,585,903		3,585,903
	Cum. % toward planned total (Net)	28.7%		28.7%
	Avg. per Bulb (Net)	28		28
Installed kW	Total (Gross)	205	0	205
	84% Realization Rate Adjustment	-33	0	-33
	Adjusted Gross Demand	172	0	172
	65% Net-To-Gross Adjustment	-60	0	-60
	Net Adjusted Demand	112	0	112
	Planned (Net)	298		298
	Cum. % toward planned total (Net)	37.5%		37.5%
	Avg. per Bulb (Net)	0.003		0.003
Program Performance	Cum. \$Admin. per Cum. Bulb (Gross)	\$0.2		\$0.2
	Cum. \$Admin. per Cum. kWh (Gross)	\$0.00		\$0.00
	Cum. \$Admin. per Cum. kW (Gross)	\$29		\$34
	Cum. \$EM&V per Cum Total Costs (\$)	3.7%	17.4%	5.2%
	Cum. \$Rebate per Cum. Bulb (Gross)	\$1		\$1

B.10 North Carolina Residential Low-income Program 2011-2015

NC- Residential Low-income Program		2011 *	2012	2013	2014	2015	2011-2015
Category	Indicator	Total	Total	Total	Total	Total	Program Total
O&M (\$)	Direct Rebate						
O&M (\$)	Direct Implementation						
O&M (\$)	Direct EM&V						
O&M (\$)	Indirect Other (Administrative)	\$20,601	\$22,730	\$15,525	\$9,060	\$24,980	\$92,895
Costs (\$)	Total						
Costs (\$)	Planned						
Costs (\$)	Variance						
	Cum. % toward planned total	87.6%	35.7%	71.7%	90.0%	76.8%	69.2%
	Audits	207	156	120	120	647	1,250
Participants	Total (Gross)	207	156	120	120	653	1,256
	Planned (Gross)	325	519	33	132	600	1,609
	Variance	-118	-363	87	-12	53	-353
	Cum % toward planned total (Gross)	63.7%	30.1%	363.6%	90.9%	108.8%	78.1%
Installed kWh/year	Total Gross Deemed Savings	200,471	183,162	106,895	102,596	537,503	1,130,626
	62% Realization Rate Adjustment	-106,249	-97,076	-26,724	-38,986	-204,251	-473,286
	Adjusted Gross Savings	94,221	86,086	80,171	63,609	333,252	657,340
	93.6% Net-To-Gross Adjustment	-6,030	-5,510	-5,131	-4,071	-21,328	-42,070
	Net Adjusted Savings	88,191	80,576	75,040	59,538	311,924	615,270
	Planned Savings (Net)	134,347	195,653	85,480	106,694	1,170,600	1,692,774
	Cum. % Toward Planned Savings (Net)	65.6%	41.2%	87.8%	55.8%	26.6%	36.3%
	Avg. Savings Per Participant (Net)	426	517	625	496	478	490
Installed kW	Total Gross Deemed Demand	61	36	27	23	128	275
	62% Realization Rate Adjustment	-32.3	-19.2	-6.7	-8.7	-48.5	-115
	Adjusted Gross Demand	29	17	20	14	79	159
	93.6% Net-To-Gross Adjustment	-2	-1	-1	-1	-5	-10
	Net Adjusted Demand	27	16	19	13	74	149
	Planned Demand (Net)	23	38	16	16	55	148
	Cum. % Toward Planned Demand (Net)	116.6%	41.9%	117.4%	83.2%	135.7%	100.9%
	Avg. Demand Per Participant (Net)	0.1	0.1	0.2	0.1	0.1	0.1
Program Performance	Cum. \$Admin. per Cum. Participant (Gross)	\$100	\$146	\$129	\$76	\$38	\$74
	Cum. \$Admin. per Cum. kWh (Gross)	\$0.10	\$0.12	\$0.15	\$0.09	\$0.05	\$0.08
	Cum. \$Admin. per Cum. kW (Gross)	\$338	\$627	\$580	\$395	\$196	\$338
	Cum. \$EM&V per Cum Total Costs (\$)	2.3%	2.7%	4.7%	3.0%	0.4%	1.7%
	Cum. \$Rebate per Cum. Participant (Gross)	\$1,067	\$989	\$1,011	\$1,043	\$1,090	\$1,062

B.11 North Carolina Residential Heat Pump Upgrade Program 2014-2017

NC - Residential Heat Pump Upgrade Program		2014	2015	2016	2017	2014-2017
Category	Indicator	Total	Total	Total	Total	Program Total
O&M (\$)	Direct Rebate					
O&M (\$)	Direct Implementation					
O&M (\$)	Direct EM&V					
O&M (\$)	Indirect Other (Administrative)	\$1,847	\$7,845	\$8,235	\$2,527	\$20,454
Costs (\$)	Total					
Costs (\$)	Planned					
Costs (\$)	Variance					
	Annual % of Planned	14%	70%	64%	191%	55%
Participants ¹	Total (Gross)	44	597	665	118	1,424
	Planned (Gross)	1,200	1,200	252	0	2,652
	Variance	-1,156	-603	413	118	-1,228
	Annual % of Planned (Gross)	4%	50%	264%		54%
Installed kWh/year	Total Gross Deemed Savings (kWh/yr)	72,449	282,170	317,574	63,092	735,286
	78% Realization Rate Adjustment (kWh/yr)	4,854	-63,206	-71,137	-14,133	-143,621
	Realization Rate Adjusted Savings (kWh/yr)	77,303	218,964	246,438	48,960	591,665
45%	Net-To-Gross Adjustment (kWh/yr)	-11,595	-120,211	-135,294	-26,879	-293,980
	Net Adjusted Savings (kWh/yr)	65,708	98,753	111,143	22,081	297,685
	Planned Net Savings (kWh/yr)	1,038,000	1,038,000	49,858	0	2,125,858
	Annual % Toward Planned Net Savings (kWh)	6%	10%	223%		14%
	Avg. Gross Savings Per Participant (kWh/yr)	1,647	473	478	535	516
	Avg. Net Savings Per Participant (kWh/yr)	1,493	165	167	187	209
Installed kW	Total Gross Demand Reduction (kW)	19	58	69	14	160
	89% Realization Rate Adjustment (kW)	-3	-6	-8	-2	-19
	Realization Rate Adjusted Gross Demand Reduction (kW)	16	51	61	13	141
45%	Net-To-Gross Adjustment (kW)	-2	-28	-33	-7	-71
	Net Adjusted Demand Reduction (kW)	14	23	27	6	70
	Planned Net Demand Reduction (kW)	348	348	18	0	714
	Annual % Toward Planned Net Reduction (kW)	4%	7%	153%		10%
	Avg. Gross Demand Reduction Per Participant (kW)	0.44	0.10	0.10	0.12	0.11
	Avg. Net Demand Reduction Per Participant (kW)	0.31	0.04	0.04	0.05	0.05
Program Performance	Annual \$Admin. per Participant (Gross)	\$42	\$13	\$12	\$21	\$14
	Annual \$Admin. per kWh/year (Gross)	\$0.03	\$0.03	\$0.03	\$0.04	\$0.03
	Annual \$Admin. per kW (Gross)	\$96	\$136	\$120	\$174	\$127.89
	Annual SEM&V per \$Total	34%	11%	7%	14%	12%
	Annual \$Rebate per Participant (Gross)	\$223	\$212	\$222	\$225	\$218

1. A participant is a single unit that has been installed and rebated. A unique account number may represent multiple participants if that account had multiple units installed and rebated.

B.12 North Carolina Residential Heat Pump Tune-up Program 2014-2017

NC - Residential Heat Pump Tune-Up Program		2014	2015	2016	2017	2014-2017
Category	Indicator	Total	Total	Total	Total	Program Total
O&M (\$)	Direct Rebate					
O&M (\$)	Direct Implementation					
O&M (\$)	Direct EM&V					
O&M (\$)	Indirect Other (Administrative)	\$3,186	\$15,540	\$6,321	\$2,018	\$27,065
Costs (\$)	Total					
Costs (\$)	Planned					
Costs (\$)	Variance					
	Annual % of Planned	25%	106%	45%	95%	61%
Participants ¹	Total (Gross)	581	3,307	1,274	125	5,287
	Planned (Gross)	2,777	2,777	1,542	0	7,096
	Variance	-2,196	530	-268	125	-1,809
	Annual % of Planned (Gross)	21%	119%	83%		75%
Installed kWh/year	Total Gross Deemed Savings (kWh/yr)	154,857	843,691	322,679	32,050	1,353,277
	99% Realization Rate Adjustment (kWh/yr)	-1,239	-6,750	-2,581	-256	-10,826
	Realization Rate Adjusted Savings (kWh/yr)	153,618	836,942	320,098	31,793	1,342,451
	90% Net-To-Gross Adjustment (kWh/yr)	-15,362	-83,694	-32,010	-3,179	-134,245
	Net Adjusted Savings (kWh/yr)	138,256	753,248	288,088	28,614	1,208,206
	Planned Net Savings (kWh/yr)	2,116,074	2,116,074	174,326	0	4,406,474
	Annual % Toward Planned Net Savings (kWh)	7%	36%	165%		27%
	Avg. Gross Savings Per Participant (kWh/yr)	267	255	253	256	256
	Avg. Net Savings Per Participant (kWh/yr)	238	228	226	229	229
Installed kW	Total Gross Demand Reduction (kW)	80	625	241	25	971
	99% Realization Rate Adjustment (kW)	-1	-5	-2	0	-8
	Realization Rate Adjusted Gross Demand Reduction (kW)	79	620	239	25	963
	90% Net-To-Gross Adjustment (kW)	-8	-62	-24	-2	-96
	Net Adjusted Demand Reduction (kW)	71	558	215	22	867
	Planned Net Demand Reduction (kW)	639	639	58	0	1,336
	Annual % Toward Planned Net Reduction (kW)	11%	87%	368%		65%
	Avg. Gross Demand Reduction Per Participant (kW)	0.14	0.19	0.19	0.20	0.18
	Avg. Net Demand Reduction Per Participant (kW)	0.12	0.17	0.17	0.18	0.16
Program Performance	Annual \$Admin. per Participant (Gross)	\$5	\$5	\$5	\$16	\$5
	Annual \$Admin. per kWh/year (Gross)	\$0.02	\$0.02	\$0.02	\$0.06	\$0.02
	Annual \$Admin. per kW (Gross)	\$40	\$25	\$26	\$81	\$28
	Annual \$EM&V per \$Total	6%	1%	3%	8%	3%
	Annual \$Rebate per Participant (Gross)	\$90	\$90	\$89	\$90	\$90

1. A participant is a single unit that has been installed and rebated. A unique account number may represent multiple participants if that account had multiple units installed and rebated.

B.13 North Carolina Residential Duct Sealing Program 2014-2017

NC - Residential Duct Sealing Program		2014	2015	2016	2017	2014-2017
Category	Indicator	Total	Total	Total	Total	ProgramTotal
O&M (\$)	Direct Rebate					
O&M (\$)	Direct Implementation					
O&M (\$)	Direct EM&V					
O&M (\$)	Indirect Other (Administrative)	\$951	\$3,700	\$4,363	\$690	\$9,704
Costs (\$)	Total					
Costs (\$)	Planned					
Costs (\$)	Variance					
	Annual % of Planned	18%	93%	121%	96%	78%
Participants ¹	Total (Gross)	0	323	217	14	554
	Planned (Gross)	346	346	101	0	793
	Variance	-346	-23	116	14	-239
	Annual % of Planned (Gross)	0%	93%	215%		70%
Installed kWh/year	Total Gross Deemed Savings (kWh/yr)	0	201,495	129,136	8,003	338,633
49%	Realization Rate Adjustment (kWh/yr)	0	-101,956	-65,343	-4,049	-171,348
	Realization Rate Adjusted Savings (kWh/yr)	0	99,538	63,793	3,953	167,285
80%	Net-To-Gross Adjustment (kWh/yr)	0	-19,908	-12,759	-791	-33,457
	Net Adjusted Savings (kWh/yr)	0	79,631	51,034	3,163	133,828
	Planned Net Savings (kWh/yr)	181,304	181,304	12,013	0	374,621
	Annual % Toward Planned Net Savings (kWh)	0%	44%	425%		36%
	Avg. Gross Savings Per Participant (kWh/yr)		624	595	572	611
	Avg. Net Savings Per Participant (kWh/yr)		247	235	226	242
Installed kW	Total Gross Demand Reduction (kW)	0	148	95	6	249
43%	Realization Rate Adjustment (kW)	0	-85	-55	-3	-143
	Realization Rate Adjusted Gross Demand Reduction (kW)	0	63	40	2	106
80%	Net-To-Gross Adjustment (kW)	0	-13	-8	0	-21
	Net Adjusted Demand Reduction (kW)	0	50	32	2	85
	Planned Net Demand Reduction (kW)	114	114	4	0	232
	Annual % Toward Planned Net Reduction (kW)	0%	44%	802%		36%
	Avg. Gross Demand Reduction Per Participant (kW)		0.46	0.44	0.42	0.45
	Avg. Net Demand Reduction Per Participant (kW)		0.16	0.15	0.14	0.15
Program Performance	Annual \$Admin. per Participant (Gross)		\$11	\$20	\$49	\$18
	Annual \$Admin. per kWh/year (Gross)		\$0.02	\$0.03	\$0.09	\$0.03
	Annual \$Admin. per kW (Gross)		\$25	\$46	\$117	\$39
	Annual \$EM&V per \$Total	41%	5%	5%	25%	9%
	Annual \$Rebate per Participant (Gross)		\$125	\$125	\$125	\$125

1. A participant is a single unit that has been installed and rebated. A unique account number may represent multiple participants if that account had multiple units installed and rebated.

B.14 North Carolina Residential Home Energy Check-up Program 2014-2017

NC - Residential Home Energy Check-Up Program		2014	2015	2016	2017	2014-2017
Category	Indicator	Total	Total	Total	Total ²	Program Total
O&M (\$)	Direct Rebate					
O&M (\$)	Direct Implementation					
O&M (\$)	Direct EM&V					
O&M (\$)	Indirect Other (Administrative)	\$654	\$11,982	\$658	\$1,086	\$14,380
Costs (\$)	Total					
Costs (\$)	Planned					
Costs (\$)	Variance					
	Annual % of Planned	17%	379%	44%	46%	123%
Participants ¹	Total (Gross)	0	996	4	49	1,049
	Planned (Gross)	160	160	881	0	1,201
	Variance	-160	836	-877	49	-152
	Annual % of Planned (Gross)	0%	623%	0%		87%
Installed kWh/year	Total Gross Deemed Savings (kWh/yr)	0	593,172	1,495	35,051	629,718
154%	Realization Rate Adjustment (kWh/yr)	0	317,347	800	18,752	336,899
	Realization Rate Adjusted Savings (kWh/yr)	0	910,520	2,294	53,803	966,617
82%	Net-To-Gross Adjustment (kWh/yr)	0	-164,804	-415	-9,738	-174,958
	Net Adjusted Savings (kWh/yr)	0	745,716	1,879	44,065	791,659
	Planned Net Savings (kWh/yr)	162,720	162,720	308,536	0	633,976
	Annual % Toward Planned Net Savings (kWh)	0%	458%	1%		125%
	Avg. Gross Savings Per Participant (kWh/yr)		596	374	715	600
	Avg. Net Savings Per Participant (kWh/yr)		749	470	899	755
Installed kW	Total Gross Demand Reduction (kW)	0	52	0	2	55
154%	Realization Rate Adjustment (kW)	0	28	0	1	29
	Realization Rate Adjusted Gross Demand Reduction (kW)	0	80	0	4	84
82%	Net-To-Gross Adjustment (kW)	0	-14	0	-1	-15
	Net Adjusted Demand Reduction (kW)	0	65	0	3	69
	Planned Net Demand Reduction (kW)	29	29	67	0	125
	Annual % Toward Planned Net Reduction (kW)	0%	227%	1%		55%
	Avg. Gross Demand Reduction Per Participant (kW)		0.05	0.04	0.05	0.05
	Avg. Net Demand Reduction Per Participant (kW)		0.07	0.05	0.06	0.07
Program Performance	Annual \$Admin. per Participant (Gross)		\$12	\$165	\$22	\$14
	Annual \$Admin. per kWh/year (Gross)		\$0.02	\$0.44	\$0.03	\$0.02
	Annual \$Admin. per kW (Gross)		\$230	\$3,983	\$443	\$263
	Annual \$EM&V per \$Total	24.8%	2.3%	50.0%	20.2%	6.7%
	Annual \$Rebate per Participant (Gross)		\$221	\$200	\$193	\$220

1. A participant is a single unit that has been installed and rebated. A unique account number may represent multiple participants if that account had multiple units installed and rebated.
2. The 2017 total gross deemed savings values reported in this table include adjustments of -2.1 kWh/year and -0.00044 kW made to the January 2017 reported savings. The adjustments accounts for corrections to STEP Manual version 7.0.0 issued on May 1, 2017. Specifically, the correction was in section 2.1.5 for "Low-Flow Showerhead" measures, to the " ΔT " variable, which is a measure of the change in temperature of the water used for shower and temperature entering the house ($\Delta T = T_{\text{shower}} - T_{\text{in house}}$). STEP Manual 7.0.0 reported the value as 44.9°F, but has been corrected to 44.1°F. This correction is reflected in STEP Manual version 8.0.0 in this EM&V report.

B.15 North Carolina Commercial Lighting Program 2011-2014

NC- Commercial Lighting Program		2011	2012	2013	2014	2011-2014
Category	Indicator	Total	Total	Total	Total	Program Total
O&M (\$)	Direct Rebate					
O&M (\$)	Direct Implementation					
O&M (\$)	Direct EM&V					
O&M (\$)	Indirect Other (Administrative)	\$16,336	\$7,585	\$5,209	\$6,628	\$35,758
Capital (\$)		\$0	\$0	\$0	\$0	\$0
Costs (\$)	Total					
Costs (\$)	Planned					
Costs (\$)	Variance					
	Cum. % toward planned total	73.4%	15.6%	24.8%	129.7%	38.7%
Participants	Total (Gross)	1	25	0	21	47
	Planned (Gross)	2	9	0	4	15
	Variance	-1	16	0	17	32
	Cum % toward planned total (Gross)	50.0%	277.8%		525.0%	313.3%
Installed kWh/year	Total Gross Deemed Savings	1,787,400	409,819	0	895,657	3,092,876
178.0%	Realization Rate Adjustment ¹	1,376,298	320,111	0	697,649	2,394,058
	Adjusted Gross Savings	3,163,699	729,930	0	1,593,306	5,486,934
50.0%	Net-To-Gross Adjustment	-1,581,849	-364,965	0	-796,653	-2,743,467
	Net Adjusted Savings	1,581,849	364,965	0	796,653	2,743,467
	Planned Savings (Net)	515,922	2,172,078	0	137,967	2,825,967
	Cum. % Toward Planned Savings (Net)	306.6%	16.8%		577.4%	97.1%
	Avg. Savings Per Participant (Net)	1,581,849	14,599		37,936	58,372
Installed kW	Total Gross Deemed Demand	682	110	0	235	1,027
98.0%	Realization Rate Adjustment	-13.6	-2	0	-5	-21
	Adjusted Gross Demand	668	108	0	231	1,006
50.0%	Net-To-Gross Adjustment	-334	-54	0	-115	-503
	Net Adjusted Demand	334	54	0	115	503
	Planned Demand (Net)	62	275	0	0	337
	Cum. % Toward Planned Demand (Net)	538.7%	19.6%			149.3%
	Avg. Demand Per Participant (Net)	334.0	2.2		5.5	10.7
Program Performance	Cum. \$Admin. per Cum. Participant (Gross)	\$16,336	\$303		\$316	\$761
	Cum. \$Admin. per Cum. kWh (Gross)	\$0.01	\$0.02		\$0.0	\$0.01
	Cum. \$Admin. per Cum. kW (Gross)	\$23.96	\$69.04		\$28	\$34.82
	Cum. \$EM&V per Cum Total Costs (\$)	4.62%	2.21%	0.00%	14.9%	6.5%
	Cum. \$Rebate per Cum. Participant (Gross)	\$158,605	\$1,726		\$1,257	\$5,465

1. Realization rate is 177% January 1st through May 30th, 179% June 1st through September 30th, and 177% October 1st through December 31st.

B.16 North Carolina Commercial HVAC Program 2011-2013

NC- Commercial HVAC Program		2011	2012	2013	2014	2011-2014
Category	Indicator	Total	Total	Total	Total	Program Total
O&M (\$)	Direct Rebate					
O&M (\$)	Direct Implementation					
O&M (\$)	Direct EM&V					
O&M (\$)	Indirect Other (Administrative)	\$1,140	\$7,812	\$5,177	\$4,091	\$18,219
Capital (\$)		\$0	\$0	\$0	\$0	\$0
Costs (\$)	Total					
Costs (\$)	Planned					
Costs (\$)	Variance					
	Cum. % toward planned total	27.4%	71.2%	52.4%	78.9%	61.5%
Participants	Total (Gross)	0	4	0	0	4
	Planned (Gross)	2	11	0	5	18
	Variance	-2	-7	0	-5	-14
	Cum % toward planned total (Gross)	0.0%	36.4%		0.0%	22.2%
Installed kWh/year	Total Gross Deemed Savings	0	388,155	0	0	388,155
63.3%	Realization Rate Adjustment ¹	0	-142,453	0	0	-142,453
	Adjusted Gross Savings	0	245,702	0	0	245,702
45.0%	Net-To-Gross Adjustment	0	-135,136	0	0	-135,136
	Net Adjusted Savings	0	110,566	0	0	110,566
	Planned Savings (Net)	58,153	299,847	0	167,666	525,666
	Cum. % Toward Planned Savings (Net)	0.0%	36.9%		0.0%	21.0%
	Avg. Savings Per Participant (Net)		27,641			27,641
Installed kW	Total Gross Deemed Demand	0	73	0	0	73
97.0%	Realization Rate Adjustment	0.0	-2	0	0	-2
	Adjusted Gross Demand	0	71	0	0	71
45.0%	Net-To-Gross Adjustment	0	-39	0	0	-39
	Net Adjusted Demand	0	32	0	0	32
	Planned Demand (Net)	22	122	0	0	144
	Cum. % Toward Planned Demand (Net)	0.0%	26.2%			22.2%
	Avg. Demand Per Participant (Net)		8			8
Program Performance	Cum. \$Admin. per Cum. Participant (Gross)		\$1,953			\$4,555
	Cum. \$Admin. per Cum. kWh (Gross)		\$0.02			\$0.05
	Cum. \$Admin. per Cum. kW (Gross)		\$107			\$249
	Cum. SEM&V per Cum Total Costs (\$)	81.6%	17.5%	0.0%	23.7%	20.1%
	Cum. \$Rebate per Cum. Participant (Gross)		\$6,323			\$6,323

1. Realization rate is 63% January 1st through May 30th, 35% June 1st through September 30th, and 63% October 1st through December 31st.

B.17 North Carolina Non-residential Duct Testing and Sealing Program 2014-2017

NC - Non-Residential Duct Sealing and Testing Program		2014	2015	2016	2017	2014-2017
Category	Indicator	Total	Total	Total ²	Total	Program Total
O&M (\$)	Direct Rebate					
O&M (\$)	Direct Implementation					
O&M (\$)	Direct EM&V					
O&M (\$)	Indirect Other (Administrative)	\$8,090	\$28,601	\$11,032	\$5,524	\$53,248
Costs (\$)	Total					
Costs (\$)	Planned					
Costs (\$)	Variance					
	Annual % of Planned	69%	196%	91%	196%	123%
Participants ¹	Total (Gross)	60	152	33	5	250
	Planned (Gross)	30	30	39	0	99
	Variance	30	122	-6	5	149
	Annual % of Planned (Gross)	200%	507%	85%		253%
Installed kWh/year	Total Gross Deemed Savings (kWh/yr)	595,895	2,400,813	550,135	184,255	3,731,098
87%	Realization Rate Adjustment (kWh/yr)	-77,466	-312,106	-71,518	-23,953	-485,043
	Realization Rate Adjusted Savings (kWh/yr)	518,428	2,088,707	478,618	160,302	3,246,055
97%	Net-To-Gross Adjustment (kWh/yr)	-14,516	-58,484	-13,401	-4,488	-90,890
	Net Adjusted Savings (kWh/yr)	503,912	2,030,224	465,216	155,813	3,155,166
	Planned Net Savings (kWh/yr)	989,610	989,610	230,534	0	2,209,754
	Annual % Toward Planned Net Savings (kWh)	51%	205%	202%		143%
	Avg. Gross Savings Per Participant (kWh/yr)	9,932	15,795	16,671	36,851	14,924
	Avg. Net Savings Per Participant (kWh/yr)	8,399	13,357	14,097	31,163	12,621
Installed kW	Total Gross Demand Reduction (kW)	65	292	160	54	570
94%	Realization Rate Adjustment (kW)	-4	-17	-9	-3	-33
	Realization Rate Adjusted Gross Demand Reduction (kW)	61	275	150	51	537
97%	Net-To-Gross Adjustment (kW)	-2	-8	-4	-1	-15
	Net Adjusted Demand Reduction (kW)	60	267	146	49	522
	Planned Net Demand Reduction (kW)	221	221	95	0	537
	Annual % Toward Planned Net Reduction (kW)	27%	121%	154%		97%
	Avg. Gross Demand Reduction Per Participant (kW)	1.08	1.92	4.84	10.77	2.28
	Avg. Net Demand Reduction Per Participant (kW)	0.99	1.76	4.43	9.86	2.09
Program Performance	Annual \$Admin. per Participant (Gross)	\$135	\$188	\$334	\$1,105	\$213
	Annual \$Admin. per kWh/year (Gross)	\$0.01	\$0.01	\$0.02	\$0.03	\$0.01
	Annual \$Admin. per kW (Gross)	\$124	\$98	\$69	\$103	\$93.42
	Annual \$EM&V per \$Total	9.3%	0.7%	2.0%	3.7%	2.8%
	Annual \$Rebate per Participant (Gross)	\$3,015	\$4,265	\$9,551	\$23,994	\$5,058

1. A participant is the first instance of unique account number that has been installed and rebated. A unique account number that may have multiple approved rebates in two or more different months is counted as a single participant.
2. The 2016 total gross deemed savings values reported in this table differs from values in the May 1, 2017 EM&V report, and have been refiled with the Commission. The adjustments totalled -83,464 kWh/year and 0 kW for 2016 reported savings. The adjustments accounts for corrections to STEP Manual version 7.0.0 issued on May 1, 2017, in section 12. The adjustment was made to full load heating hours (FLHheat) in Tables 90 and 91 to be consistent with those in the Mid-Atlantic TRM v 6, in response to requests by the North Carolina Public Staff Utilities Commission Re: Docket No. E-22, Sub 545, on October 23, 2017. This affected multiple non-residential HVAC measures (e.g. heat pumps, variable refrigerant flow, mini split systems) that reference Table 90 and 91, in multiple non-residential programs. This adjustment is reflected in STEP Manual version 8.0.0 in this EM&V report.

Another adjustment was made to correct the full load cooling hours in North Carolina for this program. The code that calculated this savings did not match the STEP Manual v 7.0.0.

B.18 North Carolina Non-residential Energy Audit Program 2014-2017

NC - Non-Residential Energy Audit Program		2014	2015	2016	2017	2014-2017
Category	Indicator	Total	Total	Total	Total	Program Total
O&M (\$)	Direct Rebate					
O&M (\$)	Direct Implementation					
O&M (\$)	Direct EM&V					
O&M (\$)	Indirect Other (Administrative)	\$6,487	\$3,164	\$3,088	\$3,936	\$16,675
Costs (\$)	Total					
Costs (\$)	Planned					
Costs (\$)	Variance					
	Annual % of Planned	139%	105%	78%	515%	127%
Audits	Total (Gross)	16	81	14	0	111
Participants ¹	Total (Gross)	16	78	12	2	108
	Planned (Gross)	37	37	48	0	122
	Variance	-21	41	-36	2	-14
	Annual % of Planned (Gross)	43%	211%	25%		89%
Installed kWh/year	Total (Gross)	495,669	225,418	270,829	825,840	1,817,756
	Attribution Rate weighted by Measure	99%	99%	99%	76%	89%
	Realization Rate weighted by Measure	99%	69%	94%	79%	85%
	Adjusted (Net) by Realization Rate and Attribution Rate	487,729	153,498	253,571	491,719	1,386,517
	Planned (Net)	1,093,017	827,170	323,638	0	2,243,824
	Annual % Toward Planned Net Savings (kWh)	45%	19%	78%		62%
	Avg. Gross Savings Per Participant (kWh/yr)	30,979	2,890	22,569	412,920	16,831
	Avg. Net Savings Per Participant (kWh/yr)	30,483	1,968	21,131	245,859	12,838
Installed kW	Total (Gross)	57	30	31	147	264
	Attribution Rate weighted by Measure	99%	99%	99%	76%	86%
	Realization Rate weighted by Measure	99%	64%	94%	79%	83%
	Adjusted kW (Net)	55	20	29	80	184
	Planned (Net)	195	179	50	0	424
	Annual % Toward Planned Net Reduction (kW)	28.5%	11.3%	58%		43%
	Avg. Gross Demand Reduction Per Participant (kW)	3.6	0.4	2.5	73.6	2.4
	Avg. Net Demand Reduction Per Participant (kW)	3.5	0.3	2.4	39.9	1.7
Program Performance	Annual \$Admin. per Participant (Gross)	\$405	\$41	\$257	\$1,968	\$154
	Annual \$Admin. per kWh/year (Gross)	\$0.01	\$0.01	\$0.01	\$0.00	\$0.01
	Annual \$Admin. per kW (Gross)	\$114	\$106	\$101	\$27	\$63
	Annual SEM&V per \$Total	12.2%	4.5%	7.2%	7.0%	8.4%
	Annual \$Rebate per Participant (Gross)	\$8,988	\$916	\$6,886	\$18,631	\$3,103

1. A participant is a single unit that has been installed and rebated. A unique account number may represent multiple participants if that account had multiple units installed and rebated.

Appendix C



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C. GROSS CUMULATIVE PERFORMANCE INDICATOR TABLES FOR VIRGINIA AND NORTH CAROLINA

Appendix C.1 Residential Income and Age Qualifying Home Improvement Program 2015-2018

PROGRAM: Residential Income and Age Qualifying Home Improvement Program
 DSM Phase IV Program
 Type: Energy Efficiency
 Program Measure Life: 14.0 years (2015-2017); 15.0 years (after 2018)

Table 1		Participation							Energy Savings						
Month	Year	Program Participants							Gross kWh						
		VA		NC			System	System Cum for IRP	VA		NC			System	System Cum for IRP
		VA Monthly New [A]	VA Monthly Retired [-A retired]	VA Cum. for IRP (New + Retired) [E] = Σ[A] + Σ[-A retired]	NC Monthly New	NC Monthly Retired	NC Cum. for IRP (New + Retired)		VA Monthly New	VA Monthly Retired	VA Cum. for IRP (New + Retired)	NC Monthly New	NC Monthly Retired	NC Cum. for IRP (New + Retired)	
January	2015	0		0			0	0	0		0				
February	2015	0		0			0	0	0		0				
March	2015	0		0			0	0	0		0			0	0
April	2015	0		0			0	0	0		0			0	0
May	2015	0		0			0	0	0		0			0	0
June	2015	0		0			0	0	0		0			0	0
July	2015	0		0			0	0	0		0			0	0
August	2015	0		0			0	0	0		0			0	0
September	2015	0		0			0	0	0		0			0	0
October	2015	44		44			0	44	2,281		2,281			0	2,281
November	2015	712		756			0	756	53,883		56,164			0	56,164
December	2015	767		1,523			0	1,523	25,855		82,019			0	82,019
January	2016	114		1,637	0		0	1,637	4,539		86,558	0		0	86,558
February	2016	224		1,861	0		0	1,861	6,899		93,457	0		0	93,457
March	2016	295		2,156	0		0	2,156	14,316		107,773	0		0	107,773
April	2016	544		2,700	0		0	2,700	19,114		126,888	0		0	126,888
May	2016	319		3,019	0		0	3,019	9,925		136,812	0		0	136,812
June	2016	623		3,642	0		0	3,642	22,148		158,960	0		0	158,960
July	2016	638		4,280	20		20	4,300	24,233		183,193	973		973	184,166
August	2016	1,891		6,171	12		32	6,203	63,722		246,915	622		1,596	248,511
September	2016	769		6,940	9		41	6,981	30,733		277,648	544		2,140	279,788
October	2016	904		7,844	25		66	7,910	27,675		305,323	1,248		3,388	308,711
November	2016	1,566		9,410	37		103	9,513	56,461		361,784	2,965		6,353	368,136
December	2016	516		9,926	54		157	10,083	18,193		379,977	2,512		8,865	388,842
January	2017	428		10,354	42		199	10,553	18,352		398,329	3,422		12,287	410,616
February	2017	202		10,556	16		215	10,771	4,908		403,237	871		13,157	416,395
March	2017	737		11,293	12		227	11,520	38,804		442,041	918		14,076	456,117
April	2017	507		11,800	13		240	12,040	18,499		460,540	594		14,669	475,209
May	2017	617		12,417	6		246	12,663	25,937		486,477	360		15,029	501,506
June	2017	585		13,002	4		250	13,252	18,400		504,877	225		15,253	520,131
July	2017	443		13,445	2		252	13,697	11,618		516,495	152		15,405	531,900
August	2017	252		13,697	4		256	13,953	10,035		526,531	456		15,861	542,392
September	2017	101		13,798	2		258	14,056	2,840		529,371	443		16,304	545,675
October	2017	513		14,311	0		258	14,569	15,534		544,904	0		16,304	561,209
November	2017	822		15,133	7		265	15,398	20,094		564,999	364		16,668	581,667
December	2017	763		15,896	22		287	16,183	17,623		582,622	1,347		18,014	600,636
January	2018	2		15,898	1		288	16,186	73		582,694	60		18,075	600,769
February	2018	0		15,898	0		288	16,186	0		582,694	0		18,075	600,769
March	2018	0		15,898	0		288	16,186	0		582,694	0		18,075	600,769
April	2018	0		15,898	0		288	16,186	0		582,694	0		18,075	600,769
May	2018	0		15,898	0		288	16,186	0		582,694	0		18,075	600,769
June	2018	0		15,898	0		288	16,186	0		582,694	0		18,075	600,769
July	2018	0		15,898	0		288	16,186	0		582,694	0		18,075	600,769
August	2018	0		15,898	0		288	16,186	0		582,694	0		18,075	600,769
September	2018	75		15,973	0		288	16,261	2,148		584,842	0		18,075	602,917
October	2018	100		16,073	0		288	16,361	4,578		589,421	0		18,075	607,495
November	2018	387		16,460	0		288	16,748	18,486		607,906	0		18,075	625,981
December	2018	577		17,037	0		288	17,325	12,030		619,936	0		18,075	638,011

Appendix C.1 Residential Income and Age Qualifying Home Improvement Program 2015-2018

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Table 1		Capacity Savings							Energy Savings / Participant			Capacity Savings / Participant		
Month	Year	Gross kW							Gross kWh/Participant for IRP			Gross kW/Participant for IRP		
		VA		NC			System	System Cum for IRP	VA	NC	System	VA	NC	System
		VA Monthly New	VA Monthly Retired	VA Cum. for IRP (New+Retired)	NC Monthly New	NC Monthly Retired	NC Cum. for IRP (New + Retired)							
January	2015	0		0					-	-	-	-	-	-
February	2015	0		0					-	-	-	-	-	-
March	2015	0		0			0	0	-	-	-	-	-	-
April	2015	0		0			0	0	-	-	-	-	-	-
May	2015	0		0			0	0	-	-	-	-	-	-
June	2015	0		0			0	0	-	-	-	-	-	-
July	2015	0		0			0	0	-	-	-	-	-	-
August	2015	0		0			0	0	-	-	-	-	-	-
September	2015	0		0			0	0	-	-	-	-	-	-
October	2015	3		3			0	3	52	-	52	0.06	-	0.06
November	2015	45		48			0	48	74	-	74	0.06	-	0.06
December	2015	32		80			0	80	54	-	54	0.05	-	0.05
January	2016	5		85	0		0	85	53	-	53	0.05	-	0.05
February	2016	12		97	0		0	97	50	-	50	0.05	-	0.05
March	2016	18		115	0		0	115	50	-	50	0.05	-	0.05
April	2016	25		140	0		0	140	47	-	47	0.05	-	0.05
May	2016	13		153	0		0	153	45	-	45	0.05	-	0.05
June	2016	28		181	0		0	181	44	-	44	0.05	-	0.05
July	2016	30		212	1		1	213	43	49	43	0.05	0.07	0.05
August	2016	87		298	1		2	301	40	50	40	0.05	0.07	0.05
September	2016	35		333	1		3	336	40	52	40	0.05	0.07	0.05
October	2016	38		372	2		4	376	39	51	39	0.05	0.07	0.05
November	2016	84		456	3		8	463	38	62	39	0.05	0.07	0.05
December	2016	22		478	3		11	489	38	56	39	0.05	0.07	0.05
January	2017	19		497	3		14	511	38	62	39	0.05	0.07	0.05
February	2017	7		505	1		15	519	38	61	39	0.05	0.07	0.05
March	2017	37		541	1		16	557	39	62	40	0.05	0.07	0.05
April	2017	21		562	1		17	579	39	61	39	0.05	0.07	0.05
May	2017	29		591	0		17	608	39	61	40	0.05	0.07	0.05
June	2017	22		613	0		17	630	39	61	39	0.05	0.07	0.05
July	2017	15		628	0		17	645	38	61	39	0.05	0.07	0.05
August	2017	9		637	0		18	655	38	62	39	0.05	0.07	0.05
September	2017	4		640	0		18	658	38	63	39	0.05	0.07	0.05
October	2017	17		657	0		18	675	38	63	39	0.05	0.07	0.05
November	2017	27		684	0		18	702	37	63	38	0.05	0.07	0.05
December	2017	23		706	1		20	726	37	63	37	0.04	0.07	0.04
January	2018	0		706	0		20	726	37	63	37	0.04	0.07	0.04
February	2018	0		706	0		20	726	37	63	37	0.04	0.07	0.04
March	2018	0		706	0		20	726	37	63	37	0.04	0.07	0.04
April	2018	0		706	0		20	726	37	63	37	0.04	0.07	0.04
May	2018	0		706	0		20	726	37	63	37	0.04	0.07	0.04
June	2018	0		706	0		20	726	37	63	37	0.04	0.07	0.04
July	2018	0		706	0		20	726	37	63	37	0.04	0.07	0.04
August	2018	0		706	0		20	726	37	63	37	0.04	0.07	0.04
September	2018	2		709	0		20	728	37	63	37	0.04	0.07	0.04
October	2018	3		712	0		20	732	37	63	37	0.04	0.07	0.04
November	2018	18		730	0		20	750	37	63	37	0.04	0.07	0.04
December	2018	11		741	0		20	761	36	63	37	0.04	0.07	0.04

Appendix C.1 Residential Income and Age Qualifying Home Improvement Program 2015-2018

Table 2. EM&V Data Incremental by Vintage Year														
	Program Participants						Gross Incremental Energy (kWh)							
			VA IRP			NC IRP	System IRP			VA IRP			NC IRP	System IRP
2015			1,523			-	1,523			140,465			-	140,465
2016			8,403			157	8,560			1,481,057			23,315	1,504,371
2017			5,970			130	6,100			1,400,701			76,649	1,477,350
2018			1,141			1	1,142			72,201			723	72,924

Table 3. EM&V Data Annualized by Vintage Year														
	Program Participants					Gross Annualized Energy (kWh)								
			VA IRP			NC IRP	System IRP			VA IRP			NC IRP	System IRP
2015			1,523			-	1,523			984,230			-	984,230
2016			8,403			157	8,560			3,575,492			106,379	3,681,872
2017			5,970			130	6,100			2,431,737			109,794	2,541,531
2018			1,141			1	1,142			447,775			723	448,498

Table 4. EM&V Data Accumulated through Vintage Year (for PPI)													
	Program Participants						Gross Energy (kWh) for PPI						
	VA				NC PPI	System	VA				NC PPI	System	
2015					-						-		
2016					157						23,315		
2017					287						183,029		
2018					288						216,897		

Table 5. EM&V Data Accumulated through Vintage Year (for IRP and NLR)														
	Program Participants						Gross Energy (kWh)							
			VA IRP			NC IRP	System IRP			VA IRP			NC IRP	System IRP
2015			1,523			-	1,523			140,465			-	140,465
2016			9,926			157	10,083			2,465,287			23,315	2,488,602
2017			15,896			287	16,183			5,960,423			183,029	6,143,452
2018			17,037			288	17,325			7,063,661			216,897	7,280,558

Appendix C.1 Residential Income and Age Qualifying Home Improvement Program 2015-2018

Table 2. EM&V Data Incremental by Vintage Year							Incremental Energy Savings/Participant			Incremental Capacity Savings/Participant		
	Gross Peak Demand (kW)						Gross kWh/Participant for IRP			Gross kW/Participant for IRP		
	VA	NC	System	VA	NC	System	VA	NC	System	VA	NC	System
2015				80		-	92	-	92	0.05	-	0.05
2016				398		11	176	149	176	0.05	0.07	0.05
2017				228		9	235	589.61	242	0.04	0.07	0.04
2018				35		0	63	723	64	0.03	0.06	0.03

Table 3. EM&V Data Annualized by Vintage Year							Annualized Energy Savings/Participant			Annualized Capacity Savings/Participant		
	Gross Peak Demand (kW)						Gross kWh/Participant for IRP			Gross kW/Participant for IRP		
	VA	NC	System	VA	NC	System	VA	NC	System	VA	NC	System
2015				80		-	646	-	646	0.05	-	0.05
2016				398		11	426	678	430	0.05	0.07	0.05
2017				228		9	407	844.57	417	0.04	0.07	0.04
2018				35		0	392	723	393	0.03	0.06	0.03

Table 4. EM&V Data Accumulated through Vintage Year (for PPI)							PPI Energy Savings/Participant			PPI Capacity Savings/Participant		
	Gross Peak Demand (kW)						Gross kWh/Participant			Gross kW/Participant		
	VA	NC	System	VA	NC	System	VA	NC	System	VA	NC	System
2015						-						
2016						11		149			0.07	
2017						20		638			0.07	
2018						20		753			0.07	

Table 5. EM&V Data Accumulated through Vintage Year (for IRP and NLR)							IRP Energy Savings/Participant			IRP Capacity Savings/Participant		
	Gross Peak Demand (kW)						Gross kWh/Participant			Gross kW/Participant		
	VA	NC	System	VA	NC	System	VA	NC	System	VA	NC	System
2015				80		-	92	-	92	0.05	-	0.05
2016				478		11	489	149	247	0.05	0.07	0.05
2017				706		20	375	638	380	0.04	0.07	0.04
2018				741		20	415	753	420	0.04	0.07	0.04

Appendix C.2 Residential Retail LED Lighting Program 2017-2018

PROGRAM: Residential LED Program
DSM Phase VI Program
Type: Energy Efficiency
Program Measure Life: 20.0 years

Table 1		Participation							Energy Savings						
Month	Year	Program Participants							Net kWh						
		VA			NC		System		VA			NC		System	
		VA Monthly New	VA Monthly Retired	VA Cum. for IRP (New + Retired) [E] = Σ[A] + Σ[-A retired]	NC Monthly New	NC Monthly Retired	NC Cum. for IRP (New + Retired) [G] = Σ[C] + Σ[-C retired]	System Cum for IRP	VA Monthly New	VA Monthly Retired	VA Cum. for IRP (New + Retired)	NC Monthly New	NC Monthly Retired	NC Cum. for IRP (New + Retired)	System Cum for IRP
		[A]	[-A retired]		[C]	[-C retired]									
December	2016							0							0
January	2017				0		0	0				0			0
February	2017				0		0	0				0			0
March	2017				0		0	0				0			0
April	2017				0		0	0				0			0
May	2017				0		0	0				0			0
June	2017				0		0	0				0			0
July	2017				0		0	0				0			0
August	2017				5,018		5,018	5,018				13,036			13,036
September	2017				14,683		19,701	19,701				37,513			50,548
October	2017				14,758		34,459	34,459				38,005			88,553
November	2017				19,836		54,295	54,295				53,335			141,888
December	2017				15,966		70,261	70,261				42,701			184,589
January	2018				12,482		82,743	82,743				23,284			207,873
February	2018				29,279		112,022	112,022				56,030			263,903
March	2018				13,614		125,636	125,636				25,803			289,706
April	2018				21,629		147,265	147,265				39,612			329,318
May	2018				11,552		158,817	158,817				22,347			351,665
June	2018				14,694		173,511	173,511				28,746			380,411
July	2018				20,050		193,561	193,561				37,711			418,121
August	2018				25,185		218,746	218,746				46,404			464,525
September	2018				32,534		251,280	251,280				53,821			518,346
October	2018				11,899		263,179	263,179				23,797			542,142
November	2018				42,003		305,182	305,182				75,855			617,997
December	2018				29,315		334,497	334,497				59,781			677,778

Table 2. EM&V Data Incremental by Vintage Year		Program Participants							Net Incremental Energy (kWh)						
		VA IRP			NC IRP		System IRP		VA IRP			NC IRP		System IRP	
2017							70,261	70,261						478,614	478,614
2018							264,236	264,236						2,846,712	2,846,712

Table 3. EM&V Data Annualized by Vintage Year		Program Participants							Net Annualized Energy (kWh)						
		VA IRP			NC IRP		System IRP		VA IRP			NC IRP		System IRP	
2017							70,261	70,261						2,215,073	2,215,073
2018							264,236	264,236						5,918,263	5,918,263

Table 5. EM&V Data Accumulated through Vintage Year (for IRP and NLR)		Program Participants							Net Energy (kWh)						
		VA IRP			NC IRP		System IRP		VA IRP			NC IRP		System IRP	
2017							70,261	70,261						478,614	478,614
2018							334,497	334,497						5,061,784	5,061,784

Appendix C.2 Residential Retail LED Lighting Program 2017-2018

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Table 1		Capacity Savings						Energy Savings / Participant			Capacity Savings / Participant		
Month	Year	Net kW						Net kWh/Participant for IRP			Net kW/Participant for IRP		
		VA		NC		System		VA	NC	System	VA	NC	System
		VA Monthly New	VA Monthly Retired	VA Cum. for IRP (New+Retired)	NC Monthly New	NC Monthly Retired	NC Cum. for IRP (New + Retired)	System Cum for IRP					
December	2016							0					
January	2017				0		0	0	-	-	-	-	-
February	2017				0		0	0	-	-	-	-	-
March	2017				0		0	0	-	-	-	-	-
April	2017				0		0	0	-	-	-	-	-
May	2017				0		0	0	-	-	-	-	-
June	2017				0		0	0	-	-	-	-	-
July	2017				0		0	0	-	-	-	-	-
August	2017				17		17	17	3	3	0.00	0.00	0.00
September	2017				49		66	66	3	3	0.00	0.00	0.00
October	2017				50		116	116	3	3	0.00	0.00	0.00
November	2017				70		186	186	3	3	0.00	0.00	0.00
December	2017				56		242	242	3	3	0.00	0.00	0.00
January	2018				29		271	271	3	3	0.00	0.00	0.00
February	2018				69		340	340	2	2	0.00	0.00	0.00
March	2018				32		372	372	2	2	0.00	0.00	0.00
April	2018				49		420	420	2	2	0.00	0.00	0.00
May	2018				27		448	448	2	2	0.00	0.00	0.00
June	2018				35		483	483	2	2	0.00	0.00	0.00
July	2018				46		529	529	2	2	0.00	0.00	0.00
August	2018				57		586	586	2	2	0.00	0.00	0.00
September	2018				66		653	653	2	2	0.00	0.00	0.00
October	2018				29		682	682	2	2	0.00	0.00	0.00
November	2018				93		775	775	2	2	0.00	0.00	0.00
December	2018				73		848	848	2	2	0.00	0.00	0.00

Table 2. EM&V Data Incremental by Vintage Year								Incremental Energy Savings/Participant			Incremental Capacity Savings/Participant		
Net Peak Demand (kW)								Net kWh/Participant for IRP			Net kW/Participant for IRP		
		VA IRP			NC IRP	System IRP		VA	NC	System	VA	NC	System
2017						242	242		-	7		-	0.00
2018						606	606		-	11		-	0.00

Table 3. EM&V Data Annualized by Vintage Year								Annualized Energy Savings/Participant			Annualized Capacity Savings/Participant		
Net Peak Demand (kW)								Net kWh/Participant for IRP			Net kW/Participant for IRP		
		VA IRP			NC IRP	System IRP		VA	NC	System	VA	NC	System
2017						242	242		32	32		0.00	0.00
2018						606	606		22	22		0.00	0.00

Table 5. EM&V Data Accumulated through Vintage Year (for IRP and NLR)								IRP Energy Savings/Participant			IRP Capacity Savings/Participant		
Net Peak Demand (kW)								Net kWh/Participant			Net kW/Participant		
		VA IRP			NC IRP	System IRP		VA	NC	System	VA	NC	System
2017						242	242		7	7		0.00	0.00
2018						848	848		15	15		0.00	0.00

Appendix C.3 Non-residential Lighting Systems and Controls Program 2014-2018

PROGRAM: Non-residential Lighting Systems and Controls
DSM Phase III Program
Type: Energy Efficiency
Program Measure Life: 5.0 years

Table 1		Participation							Energy Savings						
		Program Participants							Gross kWh						
		VA			NC			System	VA			NC			System
Month	Year	VA Monthly New	VA Monthly Retired	VA Cum. for IRP (New + Retired)	NC Monthly New	NC Monthly Retired	NC Cum. for IRP (New + Retired)	System Cum. for IRP	VA Monthly New	VA Monthly Retired	VA Cum. for IRP (New + Retired)	NC Monthly New	NC Monthly Retired	NC Cum. for IRP (New + Retired)	System Cum. for IRP
		[A]	[-A retired]	[E] = Σ[A] + Σ[-A retired]	[C]	[-C retired]	[G] = Σ[C] + Σ[-C retired]	E+G							
January	2014	0	0	0	0	0	0	0	0	0	0	0	0	0	0
February	2014	0	0	0	0	0	0	0	0	0	0	0	0	0	0
March	2014	0	0	0	0	0	0	0	0	0	0	0	0	0	0
April	2014	0	0	0	0	0	0	0	0	0	0	0	0	0	0
May	2014	0	0	0	0	0	0	0	0	0	0	0	0	0	0
June	2014	0	0	0	0	0	0	0	0	0	0	0	0	0	0
July	2014	0	0	0	0	0	0	0	0	0	0	0	0	0	0
August	2014	0	0	0	0	0	0	0	0	0	0	0	0	0	0
September	2014	0	0	0	0	0	0	0	0	0	0	0	0	0	0
October	2014	14	0	14	0	0	0	14	22,981	0	22,981	0	0	0	22,981
November	2014	63	0	77	0	0	0	77	167,666	0	167,666	0	0	0	167,666
December	2014	41	0	118	0	0	0	118	205,161	0	205,161	0	0	0	205,161
January	2015	50	0	168	0	0	0	168	80,379	0	80,379	0	0	0	80,379
February	2015	48	0	216	0	0	0	216	146,110	0	146,110	0	0	0	146,110
March	2015	68	0	284	0	0	0	284	125,407	0	125,407	0	0	0	125,407
April	2015	71	0	355	0	0	0	355	290,147	0	290,147	0	0	0	290,147
May	2015	112	0	467	0	0	0	467	482,342	0	482,342	0	0	0	482,342
June	2015	110	0	577	0	0	0	577	850,558	0	850,558	0	0	0	850,558
July	2015	78	0	655	0	0	0	655	227,073	0	227,073	0	0	0	227,073
August	2015	127	0	782	0	0	0	782	285,555	0	285,555	0	0	0	285,555
September	2015	279	0	1,060	0	0	0	1,060	415,709	0	415,709	0	0	0	415,709
October	2015	162	0	1,222	0	0	0	1,222	640,872	0	640,872	0	0	0	640,872
November	2015	62	0	1,284	0	0	0	1,284	178,091	0	178,091	0	0	0	178,091
December	2015	75	0	1,359	0	0	0	1,359	313,507	0	313,507	0	0	0	313,507
January	2016	104	0	1,463	0	0	0	1,463	361,959	0	361,959	0	0	0	361,959
February	2016	53	0	1,516	0	0	0	1,516	245,750	0	245,750	0	0	0	245,750
March	2016	113	0	1,629	0	0	0	1,629	413,500	0	413,500	0	0	0	413,500
April	2016	71	0	1,700	0	0	0	1,700	270,437	0	270,437	0	0	0	270,437
May	2016	124	0	1,824	0	0	0	1,824	388,209	0	388,209	0	0	0	388,209
June	2016	160	0	1,984	0	0	0	1,984	772,155	0	772,155	0	0	0	772,155
July	2016	141	0	2,125	0	0	0	2,125	598,731	0	598,731	0	0	0	598,731
August	2016	130	0	2,254	0	0	0	2,254	702,864	0	702,864	0	0	0	702,864
September	2016	66	0	2,320	0	0	0	2,320	391,390	0	391,390	0	0	0	391,390
October	2016	74	0	2,404	0	0	0	2,404	370,591	0	370,591	0	0	0	370,591
November	2016	92	0	2,496	0	0	0	2,496	673,164	0	673,164	0	0	0	673,164
December	2016	66	0	2,562	0	0	0	2,562	1,000,877	0	1,000,877	0	0	0	1,000,877
January	2017	81	0	2,643	0	0	0	2,643	588,424	0	588,424	0	0	0	588,424
February	2017	78	0	2,721	0	0	0	2,721	390,893	0	390,893	0	0	0	390,893
March	2017	86	0	2,807	0	0	0	2,807	618,426	0	618,426	0	0	0	618,426
April	2017	81	0	2,888	0	0	0	2,888	488,200	0	488,200	0	0	0	488,200
May	2017	77	0	2,975	0	0	0	2,975	434,562	0	434,562	0	0	0	434,562
June	2017	76	0	3,051	0	0	0	3,051	321,486	0	321,486	0	0	0	321,486
July	2017	66	0	3,117	0	0	0	3,117	260,116	0	260,116	0	0	0	260,116
August	2017	77	0	3,194	0	0	0	3,194	541,903	0	541,903	0	0	0	541,903
September	2017	64	0	3,258	0	0	0	3,258	852,455	0	852,455	0	0	0	852,455
October	2017	78	0	3,336	0	0	0	3,336	796,336	0	796,336	0	0	0	796,336
November	2017	57	0	3,393	0	0	0	3,393	640,436	0	640,436	0	0	0	640,436
December	2017	35	0	3,428	0	0	0	3,428	278,808	0	278,808	0	0	0	278,808
January	2018	13	0	3,441	0	0	0	3,441	77,471	0	77,471	0	0	0	77,471
February	2018	60	0	3,501	0	0	0	3,501	334,509	0	334,509	0	0	0	334,509
March	2018	32	0	3,533	0	0	0	3,533	233,028	0	233,028	0	0	0	233,028
April	2018	22	0	3,555	0	0	0	3,555	101,148	0	101,148	0	0	0	101,148
May	2018	48	0	3,597	0	0	0	3,597	421,552	0	421,552	0	0	0	421,552
June	2018	47	0	3,644	0	0	0	3,644	296,376	0	296,376	0	0	0	296,376
July	2018	48	0	3,692	0	0	0	3,692	308,830	0	308,830	0	0	0	308,830
August	2018	64	0	3,756	0	0	0	3,756	226,673	0	226,673	0	0	0	226,673
September	2018	66	0	3,822	0	0	0	3,822	301,155	0	301,155	0	0	0	301,155
October	2018	134	0	3,956	0	0	0	3,956	607,007	0	607,007	0	0	0	607,007
November	2018	47	0	4,003	0	0	0	4,003	107,080	0	107,080	0	0	0	107,080
December	2018	76	0	4,079	0	0	0	4,079	547,401	0	547,401	0	0	0	547,401

Table 2. EN&V Data Incremental by Vintage Year		Gross Incremental Energy (kWh)						
		Program Participants			System IRP			
		VA IRP	NC IRP	System IRP	VA IRP	NC IRP	System IRP	
2014		118	-	118	609,435	-	609,435	
2015		1,241	13	1,254	25,294,469	159,154	25,453,623	
2016		1,203	43	1,246	33,558,302	1,703,743	35,262,045	
2017		868	23	891	37,922,659	1,033,422	38,956,081	
2018		649	43	692	20,472,245	1,467,200	21,939,444	

Table 3. EN&V Data Annualized by Vintage Year		Gross Annualized Energy (kWh)						
		Program Participants			System IRP			
		VA IRP	NC IRP	System IRP	VA IRP	NC IRP	System IRP	
2014		118	-	118	4,749,693	-	4,749,693	
2015		1,241	13	1,254	50,828,062	564,326	51,392,388	
2016		1,203	43	1,246	65,876,985	3,333,527	69,210,512	
2017		868	23	891	71,024,607	1,738,121	72,762,728	
2018		649	43	692	45,157,541	5,172,076	50,329,617	

Table 5. EN&V Data Accumulated through Vintage Year (for IRP and NLR)		Gross Energy (kWh)						
		Program Participants			System IRP			
		VA IRP	NC IRP	System IRP	VA IRP	NC IRP	System IRP	
2014		118	-	118	609,435	-	609,435	
2015		1,359	13	1,372	30,044,162	159,154	30,203,316	
2016		2,562	56	2,618	89,136,057	2,668,069	91,804,126	
2017		3,430	79	3,509	159,427,808	4,931,775	164,359,583	
2018		4,079	122	4,201	212,951,591	7,103,174	220,054,765	

Appendix C.3 Non-residential Lighting Systems and Controls Program 2014-2018

Table 1		Capacity Savings						Energy Savings / Participant			Capacity Savings / Participant		
Month	Year	Gross kW		NC			System	Gross kWh/Participant for IRP			Gross kW/Participant for IRP		
		VA	VA Monthly Retired	VA Cum. for IRP (New+Retired)	NC Monthly New	NC Monthly Retired		VA	NC	System	VA	NC	System
January	2014	0		0			0						
February	2014	0		0			0						
March	2014	0		0			0						
April	2014	0		0			0						
May	2014	0		0			0						
June	2014	0		0			0						
July	2014	0		0			0						
August	2014	0		0			0						
September	2014	0		0			0						
October	2014	59		59			59	1,641			4.37		4.37
November	2014	421		480			480	2,476			6.24		6.24
December	2014	518		998			998	3,354			8.46		8.46
January	2015	196		1,194	0		0	1,194	2,834		7.11		7.11
February	2015	380		1,574	0		0	1,574	2,881		7.29		7.29
March	2015	938		2,512	0		0	2,512	3,337		8.85		8.85
April	2015	712		3,225	7		7	3,232	3,487	2,694	9.08	7.13	9.08
May	2015	1,201		4,426	0		7	4,433	3,683	2,694	9.48	7.13	9.47
June	2015	2,167		6,592	0		7	6,600	4,455	1,347	11.43	3.56	11.40
July	2015	563		7,156	0		7	7,163	4,271	1,347	4,262	10.92	3.56
August	2015	659		7,815	0		7	7,822	3,943	1,347	3,936	9.99	3.56
September	2015	961		8,776	23		29	8,806	3,301	2,516	3,297	8.28	5.82
October	2015	1,591		10,367	65		94	10,461	3,388	4,244	3,395	8.48	9.41
November	2015	420		10,787	3		97	10,884	3,363	3,967	3,368	8.40	8.80
December	2015	885		11,673	8		105	11,777	3,408	3,617	3,410	8.59	8.05
January	2016	1,059		12,732	3		107	12,839	3,413	3,430	3,413	8.70	7.67
February	2016	768		13,500	0		116	13,616	3,456	3,411	3,455	8.90	7.76
March	2016	1,148		14,648	224		340	14,988	3,470	7,471	3,511	8.99	20.03
April	2016	751		15,398	61		401	15,800	3,484	8,200	3,534	9.06	22.29
May	2016	1,083		16,481	0		401	16,883	3,460	8,200	3,506	9.04	22.29
June	2016	2,125		18,606	51		453	19,059	3,570	6,054	3,605	9.38	16.16
July	2016	1,745		20,351	20		473	20,824	3,615	6,089	3,648	9.58	16.30
August	2016	1,889		22,240	161		633	22,873	3,704	5,523	3,738	9.82	14.08
September	2016	1,122		23,362	13		646	24,008	3,767	5,506	3,800	10.03	14.05
October	2016	992		24,353	82		728	25,081	3,805	5,507	3,840	10.13	14.28
November	2016	1,870		26,223	40		768	26,991	3,934	5,530	3,968	10.51	14.50
December	2016	830		27,053	79		848	27,900	3,951	5,800	3,990	10.66	15.14
January	2017	1,113		28,166	0		848	29,013	4,045	5,807	4,082	10.66	14.87
February	2017	805		28,971	0		848	29,818	4,072	5,778	4,108	10.65	14.62
March	2017	1,189		30,159	36		884	31,043	4,168	5,811	4,202	10.74	14.73
April	2017	948		31,108	55		939	32,047	4,220	5,726	4,253	10.77	14.45
May	2017	873		31,981	116		1,055	33,036	4,243	5,846	4,280	10.75	14.86
June	2017	505		32,486	0		1,055	33,541	4,240	5,846	4,276	10.64	14.88
July	2017	461		32,947	0		1,055	34,003	4,233	5,846	4,269	10.56	14.86
August	2017	964		33,911	22		1,077	34,988	4,301	5,915	4,336	10.61	14.96
September	2017	1,225		35,136	94		1,171	36,307	4,395	6,212	4,436	10.78	15.62
October	2017	1,649		36,785	7		1,178	37,963	4,531	6,000	4,564	11.02	15.11
November	2017	1,537		38,322	4		1,182	39,505	4,644	5,944	4,673	11.29	14.97
December	2017	689		39,011	0		1,182	40,193	4,676	5,945	4,705	11.37	14.97
January	2018	134		39,144	0		1,182	40,327	4,681	5,945	4,710	11.37	14.97
February	2018	625		39,770	92		1,274	41,044	4,697	6,280	4,732	11.35	15.73
March	2018	271		40,041	63		1,337	41,378	4,720	5,674	4,745	11.33	14.23
April	2018	144		40,185	5		1,342	41,529	4,719	5,415	4,738	11.30	13.56
May	2018	923		41,107	4		1,346	42,453	4,784	5,183	4,795	11.44	12.94
June	2018	499		41,606	7		1,353	42,905	4,804	4,956	4,808	11.43	12.39
July	2018	551		42,157	158		1,512	43,669	4,825	5,394	4,842	11.43	13.38
August	2018	442		42,600	0		1,512	44,141	4,803	5,394	4,820	11.35	13.38
September	2018	608		43,207	0		1,512	44,749	4,799	5,394	4,816	11.31	13.38
October	2018	1,229		44,436	20		1,512	46,065	4,790	5,307	4,804	11.27	13.09
November	2018	510		45,076	0		1,512	46,072	4,810	5,307	4,816	11.26	13.09
December	2018	1,157		46,233	761		2,292	48,525	4,855	7,383	4,928	11.33	18.79

Table 2. EM&V Data Incremental by Vintage Year		Incremental Energy Savings/Participant			Incremental Capacity Savings/Participant		
Gross Peak Demand (kW)		Gross kWh/Participant for IRP			Gross kW/Participant for IRP		
		VA	NC	System	VA	NC	System
2014		998			8.46		
2015		10,674			8.60		
2016		15,380			12.78		
2017		11,958			13.78		
2018		7,222			11.13		

Table 3. EM&V Data Annualized by Vintage Year		Annualized Energy Savings/Participant			Annualized Capacity Savings/Participant		
Gross Peak Demand (kW)		Gross kWh/Participant for IRP			Gross kW/Participant for IRP		
		VA	NC	System	VA	NC	System
2014		998			8.46		
2015		10,674			8.60		
2016		15,380			12.78		
2017		11,958			13.78		
2018		7,222			11.13		

Table 5. EM&V Data Accumulated through Vintage Year (for IRP and NLR)		IRP Energy Savings/Participant			IRP Capacity Savings/Participant		
Gross Peak Demand (kW)		Gross kWh/Participant			Gross kW/Participant		
		VA	NC	System	VA	NC	System
2014		998			8.46		
2015		11,673			8.59		
2016		27,053			10.56		
2017		39,011			11.37		
2018		46,233			11.33		

Appendix C.4 Non-residential Heating and Cooling Efficiency Program 2014-2018

PROGRAM: Non-Residential Heating and Cooling Efficiency
DSM Phase III Program
Type: Energy Efficiency
Program Measure Life: 15.0 years

Table 1		Participation Program Participants							Energy Savings Gross kWh						
Month	Year	VA		NC		System			VA		NC		System		
		VA Monthly New	VA Monthly Retired	VA Cum. for IRP (New + Retired) [E] = Σ[A] + Σ-A retired	NC Monthly New	NC Monthly Retired	NC Cum. for IRP (New + Retired) [G] = Σ[C] + Σ-C retired	System Cum for IRP	VA Monthly New	VA Monthly Retired	VA Cum. for IRP (New + Retired)	NC Monthly New	NC Monthly Retired	NC Cum. for IRP (New + Retired)	System Cum for IRP
		[A]	[-A retired]		[C]	[-C retired]		E+G							
January	2014	0		0				0	0			0			0
February	2014	0		0				0	0			0			0
March	2014	0		0				0	0			0			0
April	2014	0		0				0	0			0			0
May	2014	0		0				0	0			0			0
June	2014	0		0				0	0			0			0
July	2014	0		0				0	0			0			0
August	2014	0		0				0	0			0			0
September	2014	0		0				0	0			0			0
October	2014	0		0				0	0			0			0
November	2014	1		1				1	71,924						71,924
December	2014	5		6				6	49,492						121,416
January	2015	1		6				7	0						121,416
February	2015	0		7				7	2,702						124,118
March	2015	0		7				7	0						124,118
April	2015	16		23				23	246,386						316,3
May	2015	34		57				57	118,448						433,7
June	2015	16		73				73	34,651						468,3
July	2015	26		99				99	167,760						636,1
August	2015	2		101				101	1,139						637,2
September	2015	7		108				108	190,538						827,7
October	2015	1		113				113	70,008						897,8
November	2015	2		115				115	52,583						950,3
December	2015	5		120				120	42,874						1,013,6
January	2016	7		127				127	29,692						1,043,3
February	2016	9		136				136	28,448						1,071,7
March	2016	4		140				140	24,484						1,096,2
April	2016	6		146				146	202,811						1,331,5
May	2016	6		152				152	76,025						1,331,5
June	2016	12		164				164	80,435						1,331,5
July	2016	7		171				171	36,771						1,331,5
August	2016	12		183				183	212,255						1,331,5
September	2016	7		190				190	255,469						1,331,5
October	2016	6		196				196	59,971						1,331,5
November	2016	6		202				202	60,419						1,331,5
December	2016	7		209				209	70,495						1,331,5
January	2017	9		218				218	10,308						1,331,5
February	2017	9		227				227	47,493						1,331,5
March	2017	1		228				228	2,197						1,331,5
April	2017	2		230				230	17,141						1,331,5
May	2017	13		243				243	198,848						1,331,5
June	2017	23		266				266	56,145						1,331,5
July	2017	12		278				278	83,386						1,331,5
August	2017	10		288				288	12,913						1,331,5
September	2017	8		296				296	84,001						1,331,5
October	2017	5		301				301	34,868						1,331,5
November	2017	10		311				311	44,982						1,331,5
December	2017	1		312				312	29,957						1,331,5
January	2018	0		312				312	0						1,331,5
February	2018	10		322				322	60,354						1,331,5
March	2018	3		325				325	15,616						1,331,5
April	2018	7		332				332	39,950						1,331,5
May	2018	5		337				337	40,413						1,331,5
June	2018	4		341				341	33,973						1,331,5
July	2018	10		351				351	84,727						1,331,5
August	2018	10		361				361	339,770						1,331,5
September	2018	10		371				371	81,028						1,331,5
October	2018	10		381				381	65,140						1,331,5
November	2018	4		385				385	10,913						1,331,5
December	2018	4		389				389	46,548						1,331,5

Table 2. EM&V Data Incremental by Vintage Year									
Program Participants					Gross Incremental Energy (kWh)				
	VA IRP	NC IRP	System IRP		VA IRP	NC IRP	System IRP		
2014	6	-	6		193,340	-	193,340		
2015	114	3	117		5,571,987	63,926	5,635,912		
2016	89	6	95		6,385,656	174,252	6,559,908		
2017	103	3	106		3,981,580	52,438	4,034,018		
2018	77	3	80		4,534,242	175,667	4,709,909		

Table 3. EM&V Data Annualized by Vintage Year									
Program Participants					Gross Annualized Energy (kWh)				
	VA IRP	NC IRP	System IRP		VA IRP	NC IRP	System IRP		
2014	6	-	6		1,416,991	-	1,416,991		
2015	114	3	117		11,129,837	91,144	11,220,982		
2016	89	6	95		13,647,306	289,500	13,936,806		
2017	103	3	106		7,526,876	82,971	7,609,846		
2018	77	3	80		5,818,796	225,775	6,044,571		

Table 5. EM&V Data Accumulated through Vintage Year (for IRP and NLR)									
Program Participants					Gross Energy (kWh)				
	VA IRP	NC IRP	System IRP		VA IRP	NC IRP	System IRP		
2014	6	-	6		193,340	-	193,340		
2015	120	3	123		7,028,978	63,926	7,092,904		
2016	209	9	218		19,172,484	265,397	19,437,881		
2017	312	12	324		30,215,714	433,083	30,648,797		
2018	389	15	404		38,295,252	639,283	38,934,534		

Appendix C.4 Non-residential Heating and Cooling Efficiency Program 2014-2018

Table 1		Capacity Savings Gross kW						Energy Savings / Participant Gross kWh/Participant for IRP			Capacity Savings / Participant Gross kW/Participant for IRP			
		VA		NC		System								
Month	Year	VA Monthly New	VA Monthly Retired	VA Cum. for IRP (New+Retired)	NC Monthly New	NC Monthly Retired	NC Cum. for IRP (New + Retired)	System Cum for IRP	VA	NC	System	VA	NC	System
January	2014	0		0				0	-	-	-	-	-	-
February	2014	0		0				0	-	-	-	-	-	-
March	2014	0		0				0	-	-	-	-	-	-
April	2014	0		0				0	-	-	-	-	-	-
May	2014	0		0				0	-	-	-	-	-	-
June	2014	0		0				0	-	-	-	-	-	-
July	2014	0		0				0	-	-	-	-	-	-
August	2014	0		0				0	-	-	-	-	-	-
September	2014	0		0				0	-	-	-	-	-	-
October	2014	0		0				0	-	-	-	-	-	-
November	2014	338		338				338	71,924		71,924	338.32		338.32
December	2014	172		510				510	20,236		20,236	85.02		85.02
January	2015	0		510	0		0	510	20,236		20,236	85.02	-	85.02
February	2015	0		512	0		0	512	17,731		17,731	73.17	-	73.17
March	2015	0		512	0		0	512	17,731		17,731	73.17	-	73.17
April	2015	672		1,134	16		16	1,130	16,109	1,581	14,947	49.30	8.24	46.06
May	2015	386		1,520	2		19	1,535	8,592	2,532	8,279	26.67	6.28	25.63
June	2015	294		1,814	0		19	1,833	7,175	2,532	6,992	24.85	6.28	24.11
July	2015	417		2,231	0		19	2,250	6,985	2,532	6,854	22.54	6.28	22.06
August	2015	15		2,246	0		19	2,265	6,858	2,532	6,734	22.24	6.28	21.70
September	2015	558		2,804	0		19	2,823	8,178	2,532	8,026	25.96	6.28	25.43
October	2015	270		3,074	0		19	3,093	8,438	2,532	8,285	27.21	6.28	26.66
November	2015	64		3,138	0		19	3,157	8,748	2,532	8,590	27.29	6.28	26.79
December	2015	149		3,287	0		19	3,306	8,741	2,532	8,589	27.39	6.28	26.88
January	2016	83		3,370	0		19	3,389	8,493	2,532	8,355	26.53	6.28	26.07
February	2016	219		3,589	0		19	3,609	8,140	2,532	8,019	26.39	6.28	25.95
March	2016	77		3,665	0		19	3,684	8,082	2,532	7,966	26.18	6.28	25.70
April	2016	270		3,935	0		19	3,953	9,139	2,127	8,952	26.95	4.80	26.38
May	2016	49	3,883	55	74		74	4,059	9,279	2,728	9,070	26.22	14.78	25.85
June	2016	268		4,253	10		83	4,334	9,090	4,441	8,900	25.93	11.92	25.36
July	2016	137		4,389	0		83	4,473	8,933	4,441	8,756	25.67	11.92	25.13
August	2016	292		4,681	0		84	4,765	9,507	3,952	9,275	25.58	10.48	24.95
September	2016	182		4,863	0		84	4,947	10,502	3,952	10,237	25.60	10.48	24.96
October	2016	145		5,009	0		84	5,093	10,486	3,952	10,230	25.55	10.48	24.90
November	2016	174		5,183	0		84	5,267	10,474	3,524	10,177	25.66	9.34	24.94
December	2016	188		5,371	0		84	5,453	10,460	3,524	10,174	25.70	9.34	24.93
January	2017	25		5,397	0		84	5,481	10,076	3,524	9,816	24.76	9.34	24.54
February	2017	67		5,464	0		84	5,549	9,885	3,524	9,643	24.07	9.34	23.53
March	2017	12		5,476	0		84	5,560	9,874	3,524	9,632	24.02	9.34	23.46
April	2017	7		5,483	0		84	5,567	9,862	3,524	9,624	23.84	9.34	23.29
May	2017	1,471		6,954	-27		57	7,011	10,153	3,789	9,901	26.62	5.69	27.71
June	2017	36		6,989	0		57	7,046	9,486	3,448	9,246	26.28	5.17	25.44
July	2017	85		7,074	0		57	7,131	9,377	3,448	9,151	25.45	5.17	24.68
August	2017	8		7,082	0		57	7,139	9,096	3,448	8,888	24.59	5.17	24.99
September	2017	133		7,215	-1		56	7,271	9,134	3,220	8,903	24.38	4.66	23.63
October	2017	48		7,263	0		56	7,319	9,098	3,220	8,873	24.13	4.66	23.38
November	2017	41		7,304	0		56	7,360	8,950	3,220	8,737	23.48	4.66	22.79
December	2017	14		7,318	0		56	7,374	9,017	3,220	8,803	23.46	4.66	22.70
January	2018	0		7,318	0		56	7,374	9,017	3,220	8,803	23.46	4.66	22.70
February	2018	29		7,347	0		56	7,403	8,925	3,220	8,720	23.82	4.66	22.18
March	2018	20		7,367	5		61	7,428	8,890	3,459	8,682	22.67	4.72	21.96
April	2018	16		7,383	79		141	7,528	8,823	3,830	8,607	22.24	9.37	21.64
May	2018	27		7,410	0		141	7,551	8,812	3,830	8,599	21.99	9.37	21.45
June	2018	89		7,499	0		141	7,640	8,808	3,830	8,590	21.99	9.37	21.46
July	2018	68		7,567	0		141	7,707	8,798	3,830	8,595	21.56	9.37	21.05
August	2018	215		7,782	0		141	7,923	9,496	3,830	9,270	21.56	9.37	21.07
September	2018	60		7,842	0		141	7,983	9,458	3,830	9,240	21.14	9.37	20.68
October	2018	64		7,906	0		141	8,047	9,381	3,830	9,171	20.75	9.37	20.31
November	2018	-43		7,863	0		141	8,003	9,312	3,830	9,106	20.42	9.37	20.02
December	2018	24		7,887	0		141	8,027	9,336	3,830	9,131	20.27	9.37	19.77

Table 2. EM&V Data Incremental by Vintage Year						Incremental Energy Savings/Participant			Incremental Capacity Savings/Participant					
Gross Peak Demand (kW)						Gross kWh/Participant for IRP			Gross kW/Participant for IRP					
						VA IRP	NC IRP	System IRP	VA	NC	System	VA	NC	System
2014						510	-	510	32,223	-	32,223	85.02	-	85.02
2015					19	2,772	2,796	48,877	21,309	48,170	24.36	5.28	23.90	
2016					65	2,084	2,150	73,996	29,042	71,157	23.42	10.88	22.63	
2017					-28	1,947	1,918	38,656	17,479	38,057	18.90	-9.40	18.10	
2018					85	569	653	58,886	58,656	58,874	7.39	28.22	8.17	

Table 3. EM&V Data Annualized by Vintage Year						Annualized Energy Savings/Participant			Annualized Capacity Savings/Participant			
Gross Peak Demand (kW)						Gross kWh/Participant for IRP			Gross kW/Participant for IRP			
	VA IRP		NC IRP		System IRP		VA	NC	System	VA	NC	System
2014		510		-	510	242,832	-	242,832	85.02	-	-	85.02
2015		2,796		19	2,796	97,630	30,381	95,906	24.36	6.28	23.90	6.28
2016		2,084		65	2,150	153,341	48,250	146,703	23.42	10.88	22.63	10.88
2017		1,947		-28	1,918	73,076	27,657	71,791	18.90	-9.40	18.10	-9.40
2018		569		85	653	127,517	75,258	125,557	7.39	28.22	8.17	28.22

Table 5. EM&V Data Accumulated through Vintage Year (for IRP and NLR)							IRP Energy Savings/Participant			IRP Capacity Savings/Participant		
Gross Peak Demand (kW)							Gross kWh/Participant			Gross kW/Participant		
	VA IRP			NC IRP		System IRP	VA	NC	System	VA	NC	System
2014		510			-	510	32,223	-	32,223	85.02	-	85.02
2015		3,287			19	3,306	58,575	21,309	57,666	27.39	6.28	26.88
2016		5,371			84	5,455	91,734	29,489	89,165	25.70	9.34	25.03
2017		7,319			56	7,374	96,845	36,090	94,595	23.46	4.66	22.76
2018		7,887			141	8,027	98,445	42,618	96,379	20.27	9.37	19.87

Appendix C.5 Non-residential Window Film Program 2014-2018

PROGRAM: Non-residential Window Film
DSM Phase III Program
Type: Energy Efficiency
Program Measure Life: 10.0 years

Table 1		Participation Program Participants							Energy Savings						
		VA			NC			System	VA			NC			System
Month	Year	VA Monthly New [A]	VA Monthly Retired [-A retired]	VA Cum. for IRP (New + Retired) retired	NC Monthly New [C]	NC Monthly Retired [-C retired]	NC Cum. for IRP (New + Retired) retired	System Cum for IRP E+G	VA Monthly New	VA Monthly Retired	VA Cum. for IRP (New + Retired)	NC Monthly New	NC Monthly Retired	NC Cum. for IRP (New + Retired)	System Cum for IRP
January	2014	0	0	0	0	0	0	0	0	0	0	0	0	0	0
February	2014	0	0	0	0	0	0	0	0	0	0	0	0	0	0
March	2014	0	0	0	0	0	0	0	0	0	0	0	0	0	0
April	2014	0	0	0	0	0	0	0	0	0	0	0	0	0	0
May	2014	0	0	0	0	0	0	0	0	0	0	0	0	0	0
June	2014	0	0	0	0	0	0	0	0	0	0	0	0	0	0
July	2014	0	0	0	0	0	0	0	0	0	0	0	0	0	0
August	2014	0	0	0	0	0	0	0	0	0	0	0	0	0	0
September	2014	0	0	0	0	0	0	0	0	0	0	0	0	0	0
October	2014	1	0	1	1	0	1	222	222	0	222	222	0	222	222
November	2014	0	0	0	1	0	1	0	0	0	0	0	0	0	0
December	2014	2	0	2	3	0	3	95,818	95,818	0	95,818	96,040	0	96,040	96,040
January	2015	2	0	2	5	0	5	10	96,050	0	96,050	96,231	0	96,231	96,231
February	2015	3	0	3	8	0	8	181	96,231	0	96,231	96,275	0	96,275	96,275
March	2015	1	0	1	9	0	9	44	96,275	0	96,275	96,275	0	96,275	96,275
April	2015	2	0	2	11	0	11	255,181	351,456	0	351,456	351,456	0	351,456	351,456
May	2015	2	0	2	13	0	13	30	351,486	0	351,486	351,486	0	351,486	351,486
June	2015	3	0	3	16	0	16	330	351,816	0	351,816	351,816	0	351,816	351,816
July	2015	1	0	1	17	0	17	17	351,816	0	351,816	351,816	0	351,816	351,816
August	2015	2	0	2	19	0	19	141	351,955	0	351,955	351,955	0	351,955	351,955
September	2015	1	0	1	20	0	20	0	351,955	0	351,955	351,955	0	351,955	351,955
October	2015	2	0	2	22	0	22	367	352,322	0	352,322	352,322	0	352,322	352,322
November	2015	1	0	1	23	0	23	165	352,487	0	352,487	352,487	0	352,487	352,487
December	2015	2	0	2	25	0	25	37	352,524	0	352,524	352,524	0	352,524	352,524
January	2016	4	0	4	29	0	29	29	366,671	0	366,671	366,671	0	366,671	366,671
February	2016	4	0	4	33	0	33	764	367,436	0	367,436	367,436	0	367,436	367,436
March	2016	7	0	7	40	0	40	2,385	369,821	0	369,821	369,821	0	369,821	369,821
April	2016	7	0	7	47	0	47	2,110	371,931	0	371,931	371,931	0	371,931	371,931
May	2016	6	0	6	53	0	53	447	372,378	0	372,378	372,378	0	372,378	372,378
June	2016	4	0	4	57	0	57	353	372,732	0	372,732	372,732	0	372,732	372,732
July	2016	3	0	3	60	0	60	3,036	375,767	0	375,767	375,767	0	375,767	375,767
August	2016	11	0	11	71	0	71	1,644	377,411	0	377,411	377,411	0	377,411	377,411
September	2016	10	0	10	81	0	81	4,165	381,576	0	381,576	381,576	0	381,576	381,576
October	2016	7	0	7	88	0	88	2,087	383,663	0	383,663	383,663	0	383,663	383,663
November	2016	6	0	6	94	0	94	7,577	391,240	0	391,240	391,240	0	391,240	391,240
December	2016	1	0	1	95	0	95	17	391,257	0	391,257	391,257	0	391,257	391,257
January	2017	4	0	4	99	0	99	2,151	393,408	0	393,408	393,408	0	393,408	393,408
February	2017	3	0	3	102	0	102	15,587	408,995	0	408,995	408,995	0	408,995	408,995
March	2017	4	0	4	106	0	106	9,920	418,916	0	418,916	418,916	0	418,916	418,916
April	2017	1	0	1	107	0	107	12,845	431,760	0	431,760	431,760	0	431,760	431,760
May	2017	7	0	7	114	0	114	996	432,756	0	432,756	432,756	0	432,756	432,756
June	2017	1	0	1	115	0	115	3,250	436,006	0	436,006	436,006	0	436,006	436,006
July	2017	3	0	3	118	0	118	16,139	452,145	0	452,145	452,145	0	452,145	452,145
August	2017	15	0	15	133	0	133	40,373	492,518	0	492,518	492,518	0	492,518	492,518
September	2017	7	0	7	140	0	140	1,566	494,084	0	494,084	494,084	0	494,084	494,084
October	2017	8	0	8	148	0	148	6,398	500,482	0	500,482	500,482	0	500,482	500,482
November	2017	6	0	6	154	0	154	35,200	535,682	0	535,682	535,682	0	535,682	535,682
December	2017	0	0	0	154	0	154	130	535,812	0	535,812	535,812	0	535,812	535,812
January	2018	3	0	3	157	0	157	5,018	540,830	0	540,830	540,830	0	540,830	540,830
February	2018	10	0	10	167	0	167	31	540,799	0	540,799	540,799	0	540,799	540,799
March	2018	2	0	2	169	0	169	429	541,228	0	541,228	541,228	0	541,228	541,228
April	2018	4	0	4	173	0	173	906	542,134	0	542,134	542,134	0	542,134	542,134
May	2018	12	0	12	185	0	185	333	542,467	0	542,467	542,467	0	542,467	542,467
June	2018	6	0	6	191	0	191	736	543,203	0	543,203	543,203	0	543,203	543,203
July	2018	3	0	3	194	0	194	274	543,476	0	543,476	543,476	0	543,476	543,476
August	2018	9	0	9	203	1	204	1,834	545,310	376	545,687	545,310	376	545,687	545,687
September	2018	10	0	10	213	0	214	1,432	546,743	0	546,743	546,743	0	546,743	546,743
October	2018	12	0	12	225	0	226	988	547,731	0	547,731	547,731	0	547,731	547,731
November	2018	6	0	6	231	0	232	790	548,520	0	548,520	548,520	0	548,520	548,520
December	2018	14	0	14	245	0	246	1,538	550,059	0	550,059	550,059	0	550,059	550,059

Table 2. EM&V Data Incremental by Vintage Year		Net Incremental Energy (kWh)						
		Program Participants			Net Incremental Energy (kWh)			
		VA IRP	NC IRP	System IRP	VA IRP	NC IRP	System IRP	
2014		3	-	3	95,483	-	95,483	
2015		22	-	22	2,303,898	-	2,303,898	
2016		70	0	70	291,593	0	291,593	
2017		59	0	59	837,481	0	837,481	
2018		91	1	92	102,781	1,882	104,663	

Table 3. EM&V Data Annualized by Vintage Year		Net Annualized Energy (kWh)						
		Program Participants			Net Annualized Energy (kWh)			
		VA IRP	NC IRP	System IRP	VA IRP	NC IRP	System IRP	
2014		3	-	3	1,152,476	-	1,152,476	
2015		22	-	22	3,077,815	-	3,077,815	
2016		70	0	70	484,794	0	484,794	
2017		59	0	59	1,734,665	0	1,734,665	
2018		91	1	92	170,954	4,516	175,470	

Table 5. EM&V Data Accumulated through Vintage Year (for IRP and NLR)		Net Energy (kWh)						
		Program Participants			Net Energy (kWh)			
		VA IRP	NC IRP	System IRP	VA IRP	NC IRP	System IRP	
2014		3	-	3	95,483	-	95,483	
2015		25	-	25	3,456,374	-	3,456,374	
2016		95	0	95	4,521,884	0	4,521,884	
2017		154	0	154	5,532,566	0	5,532,566	
2018		245	1	246	6,532,501	1,882	6,534,383	