

# Appendix D.17 Commercial Lighting Program 2010-2018

Commercial Lighting Program  
 Measure Life: 10 years  
 Measure Type: Energy Efficiency  
 Measure Life: 10 years

Month	Year	Participation						Energy Savings								
		VA			NC			VA			NC					
		VA Monthly Cum.	VA Monthly Cum. Retired	VA Cum. for IRP (New + Retired) [Σ(A) + Σ(A) retired]	NC Monthly Cum.	NC Monthly Cum. Retired	NC Cum. for IRP (New + Retired) [Σ(C) + Σ(C) retired]	VA Monthly Cum.	VA Monthly Cum. Retired	VA Cum. for IRP (New + Retired)	NC Monthly Cum.	NC Monthly Cum. Retired	NC Cum. for IRP (New + Retired)			
May 2010	2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
June 2010	2010	12	-	12	-	-	12	135,000	-	135,000	-	-	-	-	-	135,000
July 2010	2010	31	-	31	-	-	31	156,960	-	156,960	-	-	-	-	-	156,960
August 2010	2010	84	-	84	-	-	84	371,105	-	371,105	-	-	-	-	-	371,105
September 2010	2010	253	-	253	-	-	253	597,436	-	597,436	-	-	-	-	-	597,436
October 2010	2010	310	-	310	-	-	310	761,945	-	761,945	-	-	-	-	-	761,945
November 2010	2010	356	-	356	-	-	356	925,966	-	925,966	-	-	-	-	-	925,966
December 2010	2010	399	-	399	-	-	399	999,000	-	999,000	-	-	-	-	-	999,000
January 2011	2011	450	0	450	0	0	450	0	0	0	0	0	0	0	0	1,004,807
February 2011	2011	1,007	0	1,007	0	0	1,007	0	0	0	0	0	0	0	0	1,175,418
March 2011	2011	1,063	0	1,063	0	0	1,063	0	0	0	0	0	0	0	0	1,523,980
April 2011	2011	1,105	0	1,105	0	0	1,105	0	0	0	0	0	0	0	0	1,680,750
May 2011	2011	1,157	0	1,157	0	0	1,157	0	0	0	0	0	0	0	0	1,945,898
June 2011	2011	1,230	0	1,230	0	0	1,230	0	0	0	0	0	0	0	0	2,129,412
July 2011	2011	1,244	0	1,244	0	0	1,244	0	0	0	0	0	0	0	0	2,537,700
August 2011	2011	1,366	0	1,366	0	0	1,366	0	0	0	0	0	0	0	0	2,601,871
September 2011	2011	1,439	0	1,439	0	0	1,439	0	0	0	0	0	0	0	0	2,814,028
October 2011	2011	1,508	0	1,508	0	0	1,508	0	0	0	0	0	0	0	0	3,312,485
November 2011	2011	1,566	0	1,566	0	0	1,566	0	0	0	0	0	0	0	0	3,495,674
December 2011	2011	1,705	0	1,705	0	0	1,705	0	0	0	0	0	0	0	0	3,873,170
January 2012	2012	1,852	2	1,854	2	1,854	2	1,707	0	1,707	0	4,130,625	131,821	131,821	131,821	4,262,446
February 2012	2012	2,088	4	2,092	4	2,092	4	2,092	0	2,092	0	4,550,521	137,096	137,096	137,096	4,699,617
March 2012	2012	2,145	6	2,151	6	2,151	6	2,151	0	2,151	0	4,749,057	137,278	137,278	137,278	4,886,334
April 2012	2012	2,177	18	2,195	18	2,195	18	2,195	0	2,195	0	4,847,139	137,513	137,513	137,513	4,984,652
May 2012	2012	2,177	18	2,195	18	2,195	18	2,195	0	2,195	0	4,973,004	139,323	139,323	139,323	5,112,327
June 2012	2012	2,322	21	2,343	21	2,343	21	2,343	0	2,343	0	4,973,004	139,323	139,323	139,323	5,251,650
July 2012	2012	2,408	24	2,432	24	2,432	24	2,432	0	2,432	0	5,208,787	153,872	153,872	153,872	5,405,640
August 2012	2012	2,409	25	2,434	25	2,434	25	2,434	0	2,434	0	5,882,199	155,436	155,436	155,436	5,607,634
September 2012	2012	2,409	25	2,434	25	2,434	25	2,434	0	2,434	0	5,889,448	156,235	156,235	156,235	5,763,869
October 2012	2012	2,409	25	2,434	25	2,434	25	2,434	0	2,434	0	5,889,448	156,235	156,235	156,235	5,920,104
November 2012	2012	2,409	26	2,435	26	2,435	26	2,435	0	2,435	0	5,889,448	162,235	162,235	162,235	6,076,339
December 2012	2012	2,409	26	2,435	26	2,435	26	2,435	0	2,435	0	5,889,448	162,235	162,235	162,235	6,232,574
January 2013	2013	2,409	26	2,435	26	2,435	26	2,435	0	2,435	0	5,889,448	162,235	162,235	162,235	6,388,809
February 2013	2013	2,409	26	2,435	26	2,435	26	2,435	0	2,435	0	5,889,448	162,235	162,235	162,235	6,545,044
March 2013	2013	2,409	26	2,435	26	2,435	26	2,435	0	2,435	0	5,889,448	162,235	162,235	162,235	6,701,279
April 2013	2013	2,409	26	2,435	26	2,435	26	2,435	0	2,435	0	5,889,448	162,235	162,235	162,235	6,857,514
May 2013	2013	2,409	26	2,435	26	2,435	26	2,435	0	2,435	0	5,889,448	162,235	162,235	162,235	7,013,749
June 2013	2013	2,409	26	2,435	26	2,435	26	2,435	0	2,435	0	5,889,448	162,235	162,235	162,235	7,170,000
July 2013	2013	2,409	26	2,435	26	2,435	26	2,435	0	2,435	0	5,889,448	162,235	162,235	162,235	7,326,251
August 2013	2013	2,409	26	2,435	26	2,435	26	2,435	0	2,435	0	5,889,448	162,235	162,235	162,235	7,482,502
September 2013	2013	2,409	26	2,435	26	2,435	26	2,435	0	2,435	0	5,889,448	162,235	162,235	162,235	7,638,753
October 2013	2013	2,409	26	2,435	26	2,435	26	2,435	0	2,435	0	5,889,448	162,235	162,235	162,235	7,795,004
November 2013	2013	2,409	26	2,435	26	2,435	26	2,435	0	2,435	0	5,889,448	162,235	162,235	162,235	7,951,255
December 2013	2013	2,409	26	2,435	26	2,435	26	2,435	0	2,435	0	5,889,448	162,235	162,235	162,235	8,107,506
January 2014	2014	2,409	26	2,435	26	2,435	26	2,435	0	2,435	0	5,889,448	162,235	162,235	162,235	8,263,757
February 2014	2014	2,409	26	2,435	26	2,435	26	2,435	0	2,435	0	5,889,448	162,235	162,235	162,235	8,420,008
March 2014	2014	2,409	26	2,435	26	2,435	26	2,435	0	2,435	0	5,889,448	162,235	162,235	162,235	8,576,259
April 2014	2014	2,409	26	2,435	26	2,435	26	2,435	0	2,435	0	5,889,448	162,235	162,235	162,235	8,732,510
May 2014	2014	2,409	30	2,439	30	2,439	30	2,439	0	2,439	0	5,889,448	175,465	175,465	175,465	8,888,761
June 2014	2014	2,409	31	2,440	31	2,440	31	2,440	0	2,440	0	5,889,448	187,179	187,179	187,179	9,045,012
July 2014	2014	2,409	32	2,441	32	2,441	32	2,441	0	2,441	0	5,889,448	193,998	193,998	193,998	9,201,263
August 2014	2014	2,409	32	2,441	32	2,441	32	2,441	0	2,441	0	5,889,448	194,148	194,148	194,148	9,357,514
September 2014	2014	2,409	34	2,443	34	2,443	34	2,443	0	2,443	0	5,889,448	205,273	205,273	205,273	9,513,765
October 2014	2014	2,409	34	2,443	34	2,443	34	2,443	0	2,443	0	5,889,448	205,273	205,273	205,273	9,670,016
November 2014	2014	2,409	45	2,454	45	2,454	45	2,454	0	2,454	0	5,889,448	227,251	227,251	227,251	9,826,267
December 2014	2014	2,409	47	2,456	47	2,456	47	2,456	0	2,456	0	5,889,448	228,622	228,622	228,622	10,000,000
January 2015	2015	2,409	47	2,456	47	2,456	47	2,456	0	2,456	0	5,889,448	228,622	228,622	228,622	10,156,251
February 2015	2015	2,409	47	2,456	47	2,456	47	2,456	0	2,456	0	5,889,448	228,622	228,622	228,622	10,312,502
March 2015	2015	2,409	47	2,456	47	2,456	47	2,456	0	2,456	0	5,889,448	228,622	228,622	228,622	10,468,753
April 2015	2015	2,409	47	2,456	47	2,456	47	2,456	0	2,456	0	5,889,448	228,622	228,622	228,622	10,625,004
May 2015	2015	2,409	47	2,456	47	2,456	47	2,456	0	2,456	0	5,889,448	228,622	228,622	228,622	10,781,255
June 2015	2015	2,409	47	2,456	47	2,456	47	2,456	0	2,456	0	5,889,448	228,622	228,622	228,622	10,937,506
July 2015	2015	2,409	47	2,456	47	2,456	47	2,456	0	2,456	0	5,889,448	228,622	228,622	228,622	11,093,757
August 2015	2015	2,409	47	2,456	47	2,456	47	2,456	0	2,456	0	5,889,448	228,622	228,622	228,622	11,250,008
September 2015	2015	2,409	47	2,456	47	2,456	47	2,456	0	2,456	0	5,889,448	228,622	228,622	228,622	11,406,259
October 2015	2015	2,409	47	2,456	47	2,456	47	2,456	0	2,456	0	5,889,448	228,622	228,622	228,622	11,562,510
November 2015																



Appendix D.17 Commercial Lighting Program 2010-2018

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Table 2. EMBV Data Incremental by Vintage Year	Program Participants (Gross)						Energy Savings (Incremental)						
	VA			NC			System			Net kWh			
2010		399				399			3,953,218				
2011		1,307			1	1,308			19,213,327		131,821	19,345,147	
2012		703			26	728			15,363,445		211,238	15,574,784	
2013		0			0	0			0		0	0	
2014		0			21	21			0		319,334	319,334	
2015		0			0	0			0		0	0	
2016		0			0	0			0		0	0	
2017		0			0	0			0		0	0	
2018		0			0	0			0		0	0	

Table 3. EMBV Data Annualized by Vintage Year	Program Participants (Gross)						Energy Savings (Annualized)						
	VA			NC			System			Net kWh			
2010		399				399			12,057,683			12,057,683	
2011		1,307			1	1,308			37,509,820		1,381,849	38,891,670	
2012		703			26	728			21,105,869		364,965	21,470,834	
2013		0			0	0			0		0	0	
2014		0			21	21			0		796,653	796,653	
2015		0			0	0			0		0	0	
2016		0			0	0			0		0	0	
2017		0			0	0			0		0	0	
2018		0			0	0			0		0	0	

Table 4. EMBV Data Accumulated through Vintage Year (for PPI)	Program Participants (Gross)						Energy Savings for Program Performance Incentives (PPI)						
	VA			NC			System			Net kWh			
2010		399				399			3,953,218			3,953,218	
2011		1,706			1	1,707			31,271,010		131,821	31,402,830	
2012		2,409			26	2,435			64,930,949		1,793,188	66,724,136	
2013		2,010			26	2,036			58,615,689		1,946,814	60,562,503	
2014		703			46	749			21,105,869		684,299	21,790,168	
2015		0			21	21			0		796,653	796,653	
2016		0			21	21			0		796,653	796,653	
2017		N/A			N/A	N/A			N/A		N/A	N/A	

Table 5. EMBV Data Accumulated through Vintage Year (for IRP)	Program Participants (Gross)						Energy Savings for Integrated Resource Planning (IRP)						
	VA			NC			System			Net kWh			
2010		399				399			3,953,218			3,953,218	
2011		1,706			1	1,707			31,271,010		131,821	31,402,830	
2012		2,409			26	2,435			70,673,372		1,793,188	72,466,560	
2013		2,409			47	2,456			70,673,372		2,266,148	72,939,520	
2014		2,409			47	2,456			70,673,372		2,266,148	72,939,520	
2015		2,409			47	2,456			70,673,372		2,266,148	72,939,520	
2016		2,409			47	2,456			70,673,372		2,266,148	72,939,520	
2017		2,409			47	2,456			70,673,372		2,266,148	72,939,520	
2018		2,409			47	2,456			70,673,372		2,266,148	72,939,520	

Table 6. EMBV Data Accumulated through Vintage Year (for NC Lost Revenue)	Program Participants (Gross)						Energy Savings for NC Lost Revenue						
	VA			NC			System			Net kWh			
2010		399				399			3,953,218			3,953,218	
2011		1,706			1	1,707			31,271,010		131,821	31,402,830	
2012		2,409			26	2,435			64,930,949		1,793,188	66,724,136	
2013		2,409			26	2,435			67,724,962		1,946,814	69,671,776	
2014		2,010			47	2,057			47,528,181		2,266,148	49,794,329	
2015		703			46	749			7,501,246		880,693	8,381,939	
2016		0			21	21			0		796,653	796,653	
2017		N/A			N/A	N/A			N/A		N/A	N/A	

Appendix D.17 Commercial Lighting Program 2010-2018

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May 01 2019

Net KW				Incremental Energy Savings / Participant Net kWh/Participant			Incremental Capacity Savings / Participant Net kW/Participant		
VA	NC	System		VA	NC	System	VA	NC	System
1,494	-	1,494		9,908	-	9,908	4	-	3.7
4,681	334	5,015		14,700	131,821	14,790	4	334	3.8
2,670	54	2,724		21,854	8,454	21,294	4	2	3.7
0	0	0		-	-	-	-	-	-
0	115	115		-	15,206	15,206	-	5	5
0	0	0		-	-	-	-	-	-
0	0	0		-	-	-	-	-	-
0	0	0		-	-	-	-	-	-
0	0	0		-	-	-	-	-	-

Net KW				Annualized Energy Savings / Participant Net kWh/Participant			Annualized Capacity Savings / Participant Net kW/Participant		
VA	NC	System		VA	NC	System	VA	NC	System
1,494	-	1,494		39,220	-	39,220	3.7	-	3.7
4,681	334	5,015		1,581,849	29,867	1,611,716	3.6	334.0	3.8
2,670	54	2,724		30,023	14,599	29,493	3.8	2.2	3.7
0	0	0		-	-	-	-	-	-
0	115	115		-	37,936	37,936	-	5.5	5.5
0	0	0		-	-	-	-	-	-
0	0	0		-	-	-	-	-	-
0	0	0		-	-	-	-	-	-
0	0	0		-	-	-	-	-	-

Net kW				PPI Energy Savings/Participant Net kWh/Participant			PPI Capacity Savings/Participant Net kW/Participant		
VA	NC	System		VA	NC	System	VA	NC	System
1,494	-	1,494		9,908	-	9,908	3.7	-	3.7
6,175	334	6,509		18,330	131,821	18,397	3.6	334.0	3.8
8,845	388	9,233		26,953	68,959	27,402	3.7	14.9	3.8
7,351	388	7,739		29,162	74,877	-	4	15	-
2,670	169	2,840		30,023	14,876	29,092	4	4	4
0	115	115		-	37,936	-	-	5	-
0	0	0		-	-	-	-	-	-
N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	N/A

Net KW				IRP Energy Savings/Participant Net kWh/Participant			IRP Capacity Savings/Participant Net kW/Participant		
VA	NC	System		VA	NC	System	VA	NC	System
1,494	-	1,494		9,908	-	9,908	3.7	-	3.7
6,175	334	6,509		18,330	131,821	18,397	3.6	334.0	3.8
8,845	388	9,233		26,953	68,959	27,402	3.7	14.9	3.8
8,845	388	9,233		29,337	74,877	29,833	3.7	14.9	3.8
8,845	503	9,349		29,337	48,216	29,699	3.7	10.7	3.8
8,845	503	9,349		29,337	58,372	29,893	3.7	10.7	3.8
8,845	503	9,349		29,337	58,372	29,893	3.7	10.7	3.8
8,845	503	9,349		29,337	58,372	29,893	3.7	10.7	3.8
8,845	503	9,349		29,337	58,372	29,893	3.7	10.7	3.8

Net kW				NC Lost Revenue Net kWh/Participant			NC Lost Revenue Capacity Net kW/Participant		
VA	NC	System		VA	NC	System	VA	NC	System
				9,908	-	9,908			
				18,330	131,821	18,397			
				26,953	68,959	27,402			
				18,111	74,877	20,612			
				21,158	48,216	21,777			
				10,670	21,319	11,324			
				-	37,936	37,936			
				N/A	N/A	N/A			

# Appendix D.18 Commercial HVAC Program 2010-2018

**PROGRAM: Commercial HVAC**  
**DSM Phase I Program**  
**Type: Energy Efficiency**  
**Measure Life: 15 years**

Month	Year	Participation						Energy Savings								
		VA			NC			Net kWh								
		VA Monthly Cum.	VA Monthly Cum. Retired	VA Cum. for IRP (New + Retired) [E] = Σ[A] + Σ[-A]	NC Monthly Cum.	NC Monthly Cum. Retired	NC Cum. for IRP (New + Retired) [G] = Σ[C] + Σ[-C]	System Count (by IRP)	VA Monthly Cum.	VA Monthly Cum. Retired	VA Cum. for IRP (New + Retired)	NC Monthly Cum.	NC Monthly Cum. Retired	NC Cum. for IRP (New + Retired)	System Count (by IRP)	
May 2010	2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
June 2010	2010	3	-	3	-	-	-	3	3,673	-	3,673	-	-	-	3	3,673
July 2010	2010	4	-	4	-	-	-	4	3,779	-	3,779	-	-	-	4	3,779
August 2010	2010	10	-	10	-	-	-	10	12,863	-	12,863	-	-	-	10	12,863
September 2010	2010	14	-	14	-	-	-	14	14,612	-	14,612	-	-	-	14	14,612
October 2010	2010	22	-	22	-	-	-	22	30,381	-	30,381	-	-	-	22	30,381
November 2010	2010	28	-	28	-	-	-	28	40,042	-	40,042	-	-	-	28	40,042
December 2010	2010	31	-	31	-	-	-	31	47,209	-	47,209	-	-	-	31	47,209
January 2011	2011	33	-	33	-	-	-	33	51,259	-	51,259	-	-	-	33	51,259
February 2011	2011	42	-	42	-	-	-	42	117,015	-	117,015	-	-	-	42	117,015
March 2011	2011	43	-	43	-	-	-	43	129,659	-	129,659	-	-	-	43	129,659
April 2011	2011	47	-	47	-	-	-	47	134,120	-	134,120	-	-	-	47	134,120
May 2011	2011	45	-	45	-	-	-	45	158,139	-	158,139	-	-	-	45	158,139
June 2011	2011	59	-	59	-	-	-	59	164,541	-	164,541	-	-	-	59	164,541
July 2011	2011	67	-	67	-	-	-	67	175,302	-	175,302	-	-	-	67	175,302
August 2011	2011	72	-	72	-	-	-	72	176,811	-	176,811	-	-	-	72	176,811
September 2011	2011	76	-	76	-	-	-	76	185,697	-	185,697	-	-	-	76	185,697
October 2011	2011	87	-	87	-	-	-	87	416,908	-	416,908	-	-	-	87	416,908
November 2011	2011	87	-	87	-	-	-	87	416,908	-	416,908	-	-	-	87	416,908
December 2011	2011	93	-	93	-	-	-	93	425,172	-	425,172	-	-	-	93	425,172
January 2012	2012	93	-	93	-	-	-	93	425,172	-	425,172	-	-	-	93	425,172
February 2012	2012	96	-	96	-	-	-	96	427,188	-	427,188	-	-	-	96	427,188
March 2012	2012	99	-	99	-	-	-	99	438,432	-	438,432	-	-	-	99	438,432
April 2012	2012	99	-	99	-	-	-	99	438,432	-	438,432	-	-	-	99	438,432
May 2012	2012	99	-	99	-	-	-	99	438,432	-	438,432	-	-	-	99	438,432
June 2012	2012	114	-	114	-	-	-	114	463,987	-	463,987	-	-	-	114	463,987
July 2012	2012	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
August 2012	2012	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
September 2012	2012	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
October 2012	2012	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
November 2012	2012	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
December 2012	2012	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
January 2013	2013	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
February 2013	2013	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
March 2013	2013	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
April 2013	2013	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
May 2013	2013	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
June 2013	2013	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
July 2013	2013	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
August 2013	2013	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
September 2013	2013	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
October 2013	2013	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
November 2013	2013	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
December 2013	2013	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
January 2014	2014	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
February 2014	2014	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
March 2014	2014	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
April 2014	2014	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
May 2014	2014	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
June 2014	2014	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
July 2014	2014	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
August 2014	2014	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
September 2014	2014	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
October 2014	2014	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
November 2014	2014	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
December 2014	2014	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
January 2015	2015	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
February 2015	2015	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
March 2015	2015	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
April 2015	2015	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
May 2015	2015	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
June 2015	2015	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
July 2015	2015	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
August 2015	2015	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
September 2015	2015	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
October 2015	2015	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
November 2015	2015	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
December 2015	2015	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
January 2016	2016	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
February 2016	2016	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
March 2016	2016	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
April 2016	2016	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
May 2016	2016	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
June 2016	2016	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
July 2016	2016	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
August 2016	2016	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
September 2016	2016	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
October 2016	2016	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
November 2016	2016	123	-	123	-	-	-	123	485,451	-	485,451	-	-	-	123	485,451
December 2016	2016	123	-	123	-	-	-</									



# Appendix D.18 Commercial HVAC Program 2010-2018

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May 01 2019

Table 2. EMBV Data Incremental by Vintage Year	Program Participants (Gross)			Energy Savings (Incremental)			
	VA	NC	System	Net kWh			
				VA	NC	System	
2010	28	-	28	105,350	-	-	105,350
2011	59	-	59	1,693,060	-	-	1,693,060
2012	36	4	40	528,192	57,627	-	585,819
2013	0	0	0	0	0	0	0
2014	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0

Table 3. EMBV Data Annualized by Vintage Year	Program Participants (Gross)			Energy Savings (Annualized)			
	VA	NC	System	Net kWh			
				VA	NC	System	
2010	28	-	28	480,508	-	-	480,508
2011	59	-	59	4,522,387	-	-	4,522,387
2012	36	4	40	822,513	110,566	-	933,079
2013	0	0	0	0	0	0	0
2014	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0

Table 4. EMBV Data Accumulated through Vintage Year (through 2018)	Program Participants (Gross)			Energy Savings for Program Performance Incentives (PPI)			
	VA	NC	System	Net kWh			
				VA	NC	System	
2010	28	-	28	105,350	-	-	105,350
2011	87	-	87	2,173,568	-	-	2,173,568
2012	123	4	127	5,531,087	57,627	-	5,588,714
2013	95	4	99	5,344,900	110,566	-	5,455,466
2014	36	4	40	822,513	110,566	-	933,079
2015	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0
2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 5. EMBV Data Accumulated through Vintage Year (for IRP)	Program Participants (Gross)			Energy Savings for Integrated Resource Planning (IRP)			
	VA	NC	System	Net kWh			
				VA	NC	System	
2010	28	-	28	105,350	-	-	105,350
2011	87	-	87	2,173,568	-	-	2,173,568
2012	123	4	127	5,531,087	57,627	-	5,588,714
2013	123	4	127	5,825,408	110,566	-	5,935,974
2014	123	4	127	5,825,408	110,566	-	5,935,974
2015	123	4	127	5,825,408	110,566	-	5,935,974
2016	123	4	127	5,825,408	110,566	-	5,935,974
2017	123	4	127	5,825,408	110,566	-	5,935,974
2018	123	4	127	5,825,408	110,566	-	5,935,974

Table 6. EMBV Data Accumulated through Vintage Year (for NC Lost Revenue)	Program Participants (Gross)			Energy Savings for NC Lost Revenue			
	VA	NC	System	Net kWh			
				VA	NC	System	
2010	28	-	28	105,350	-	-	105,350
2011	87	-	87	2,173,568	-	-	2,173,568
2012	123	4	127	5,531,087	57,627	-	5,588,714
2013	123	4	127	5,760,100	110,566	-	5,870,666
2014	95	4	99	4,028,706	110,566	-	4,139,271
2015	36	4	40	362,864	62,152	-	425,016
2016	0	0	0	0	0	0	0
2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A

# Appendix D.18 Commercial HVAC Program 2010-2018

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May 01 2019

Net kW				Incremental Energy Savings / Participant Net kWh / Participant			Incremental Capacity Savings / Participant Net kW / Participant		
VA	NC	System		VA	NC	System	VA	NC	System
176	-	176		3,763	-	3,763	6	-	6
983	-	983		28,696	-	28,696	17	-	17
398	32	430		14,672	14,407	14,645	11	-	11
0	0	0		-	-	-	-	-	-
0	0	0		-	-	-	-	-	-
0	0	0		-	-	-	-	-	-
0	0	0		-	-	-	-	-	-
0	0	0		-	-	-	-	-	-

Net kW				Annualized Energy Savings / Participant Net kWh / Participant			Annualized Capacity Savings / Participant Net kW / Participant		
VA	NC	System		VA	NC	System	VA	NC	System
176	-	176		17,161	-	17,161	6	-	6
983	-	983		76,651	-	76,651	17	-	17
398	32	430		22,848	27,641	23,327	11	8	11
0	0	0		-	-	-	-	-	-
0	0	0		-	-	-	-	-	-
0	0	0		-	-	-	-	-	-
0	0	0		-	-	-	-	-	-
0	0	0		-	-	-	-	-	-

Net kW				PPI Energy Net kWh / Participant			PPI Capacity Savings / Participant Net kW / Participant		
VA	NC	System		VA	NC	System	VA	NC	System
176	-	176		3,763	-	3,763	6	-	6
1,158	-	1,158		24,984	-	24,984	13	-	13
1,380	32	1,412		44,968	14,407	44,006	11	8	11
1,380	32	1,412		56,262	27,641	55,106	15	8	14
398	32	430		22,848	27,641	23,327	11	8	11
0	0	0		-	-	-	-	-	-
0	0	0		-	-	-	-	-	-
0	0	0		-	-	-	-	-	-
N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	N/A

Net kW				IRP Energy Savings / Participant Net kWh / Participant			IRP Capacity Savings / Participant Net kW / Participant		
VA	NC	System		VA	NC	System	VA	NC	System
176	-	176		3,763	-	3,763	6	-	6
1,158	-	1,158		24,984	-	24,984	13	-	13
1,556	32	1,588		44,968	14,407	44,006	13	8	13
1,556	32	1,588		47,361	27,641	46,740	13	8	13
1,556	32	1,588		47,361	27,641	46,740	13	8	13
1,556	32	1,588		47,361	27,641	46,740	13	8	13
1,556	32	1,588		47,361	27,641	46,740	13	8	13
1,556	32	1,588		47,361	27,641	46,740	13	8	13
1,556	32	1,588		47,361	27,641	46,740	13	8	13

Net kW				NC Lost Revenue Net kWh / Participant			NC Lost Revenue Capacity Net kW / Participant		
VA	NC	System		VA	NC	System	VA	NC	System
				3,763	-	3,763			
				24,984	-	24,984			
				44,968	14,407	44,006			
				46,830	27,641	46,226			
				42,407	27,641	41,811			
				10,080	15,538	10,625			
				-	-	-			
				N/A	N/A	N/A			

# Appendix D.19 Non-residential Duct Testing and Sealing Program 2012-2018

**PROGRAM: Non-Residential Duct Testing & Sealing**  
**DSM Phase II Program**  
**Type: Energy Efficiency**  
**Program Measure Life: 25.0 years**

Table 1		Participation Program Participants											System Cum for IRP
Month	Year	VA					NC						
		VA Monthly New	VA Monthly Retired	VA Cum. for IRP (New + Retired)	VA Rate Reset Adj.	VA Cum. for Net Lost Revenue (NLR) (New + Retired + Rate Reset Adj.)	NC Monthly New	NC Monthly Retired	NC Cum. for IRP (New + Retired)	NC Rate Reset Adj.	NC Cum. for Net Lost Revenue (NLR) (New + Retired + Rate Reset Adj.)		
		[A]	[-A retired]	[E] = Σ[A] + Σ[-A retired]	[B]	[F] = Σ[A] + Σ[-A retired] + B	[C]	[-C retired]	[G] = Σ[C] + Σ[-C retired]	[D]	[H] = Σ[C] + Σ[-C retired] + D		
October	2012	0		0		0							
November	2012	1		1		1							
December	2012	10		11		11							
January	2013	2		13		13							
February	2013	0		13		13							
March	2013	8		21		21							
April	2013	17		38		38							
May	2013	12		50		50							
June	2013	4		54		54							
July	2013	27		81		81							
August	2013	24		105		105							
September	2013	67		172		172							
October	2013	63		235		235							
November	2013	30		265		265							
December	2013	103		368		368							
January	2014	22		390		390	0		0		0		0
February	2014	106		496		496	0		0		0		0
March	2014	243		739		739	0		0		0		0
April	2014	125		864		864	0		0		0		0
May	2014	115		979		979	0		0		0		0
June	2014	98		1,077		1,077	0		0		0		0
July	2014	166		1,243		1,243	0		0		0		0
August	2014	190		1,433		1,433	0		0		0		0
September	2014	206		1,639		1,639	0		0		0		0
October	2014	212		1,851		1,851	0		0		0		0
November	2014	137		1,988		1,988	46		46		46		46
December	2014	80		2,068		2,068	14		60		60		60
January	2015	100		2,168		2,168	12		72		72		72
February	2015	81		2,249		2,249	4		76		76		76
March	2015	116		2,365		2,365	2		78		78		78
April	2015	193		2,558		2,558	62		140		140		140
May	2015	112		2,670		2,670	13		153		153		153
June	2015	215		2,885		2,885	40		193		193		193
July	2015	101		2,986		2,986	9		202		202		202
August	2015	207		3,193		3,193	7		209		209		209
September	2015	250		3,443		3,443	0		209		209		209
October	2015	89		3,532		3,532	2		211		211		211
November	2015	93		3,625		3,625	1		212		212		212
December	2015	98		3,723		3,723	0		212		212		212
January	2016	49		3,772		3,772	0		212		212		212
February	2016	59		3,831		3,831	1		213		213		213
March	2016	41		3,872		3,872	0		213		213		213
April	2016	47		3,919		3,919	4		217		217		217
May	2016	21		3,940		3,940	3		220		220		220
June	2016	61		4,001		4,001	5		225		225		225
July	2016	52		4,053		4,053	4		229	4	229		229
August	2016	43		4,096		4,096	5		234	9	234		234
September	2016	61		4,157		4,157	1		235	10	235		235
October	2016	77		4,234		4,234	2		237	12	237		237
November	2016	72		4,306		4,306	8		245	20	245		245
December	2016	57		4,363		4,363	0		245	20	245		245
January	2017	43		4,405		4,405	3		248		248		248
February	2017	38		4,443		4,443	1		249		249		249
March	2017	1		4,444		4,444	1		250		250		250
April	2017	0		4,444		4,444	0		250		250		250
May	2017	0		4,444		4,444	0		250		250		250
June	2017	0		4,444		4,444	0		250		250		250
July	2017	0		4,444		4,444	0		250		250		250
August	2017	0		4,444		4,444	0		250		250		250
September	2017	0		4,444		4,444	0		250		250		250
October	2017	0		4,444		4,444	0		250		250		250
November	2017	0		4,444		4,444	0		250		250		250
December	2017	0		4,444		4,444	0		250		250		250

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May 01 2019

# Appendix D.19 Non-residential Duct Testing and Sealing Program 2012-2018

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May 01 2019

Table 1		Energy Savings										System Cum for IRP	
Month	Year	VA					NC						
		VA Monthly New	VA Monthly Retired	VA Cum. for IRP (New + Retired)	VA Rate Reset Adj.	VA Cum. for Net Lost Revenue (NLR) (New + Retired + Rate Reset Adj.)	NC Monthly New	NC Monthly Retired	NC Cum. for IRP (New + Retired)	NC Rate Reset Adj.	NC Cum. for Net Lost Revenue (NLR) (New + Retired + Rate Reset Adj.)		
October	2012	0		0		0							
November	2012	152		152		152							
December	2012	5,327		5,478		5,478							
January	2013	1,990		7,469		7,469							
February	2013	0		7,469		7,469							
March	2013	2,208		9,677		9,677							
April	2013	2,242		11,919		11,919							
May	2013	3,147		15,066		15,066							
June	2013	248		15,315		15,315							
July	2013	11,666		26,981		26,981							
August	2013	6,619		33,600		33,600							
September	2013	23,531		57,130		57,130							
October	2013	26,550		83,680		83,680							
November	2013	9,686		93,366		93,366							
December	2013	36,540		129,906		129,906							
January	2014	11,178		141,084		141,084	0		0				
February	2014	60,951		202,035		202,035	0		0				
March	2014	94,998		296,632		296,632	0		0				
April	2014	153,591		450,224		450,224	0		0				
May	2014	86,282		536,505		536,505	0		0				
June	2014	109,785		646,291		646,291	0		0				
July	2014	243,423		889,713		889,713	0		0				
August	2014	178,317		1,068,031		1,068,031	0		0				
September	2014	307,626		1,375,657		1,375,657	0		0				
October	2014	420,776		1,796,433		1,796,433	0		0				
November	2014	246,917		2,043,350		2,043,350	38,558		38,558		38,558		
December	2014	92,862		2,136,212		2,136,212	3,435		41,993		41,993		
January	2015	-96,461		2,039,752		2,039,752	30,380		72,373		72,373		
February	2015	365,963		2,405,715		2,405,715	1,113		73,485		73,485		
March	2015	87,470		2,493,185		2,493,185	1,695		75,181		75,181		
April	2015	141,609		2,634,794		2,634,794	52,676		127,857		127,857		
May	2015	50,682		2,685,475		2,685,475	17,352		145,209		145,209		
June	2015	168,027		2,853,502		2,853,502	32,025		177,234		177,234		
July	2015	49,381		2,902,883		2,902,883	17,142		194,376		194,376		
August	2015	196,108		3,098,990		3,098,990	11,300		205,677		205,677		
September	2015	183,945		3,282,935		3,282,935	0		205,677		205,677		
October	2015	74,140		3,357,075		3,357,075	2,530		208,207		208,207		
November	2015	75,247		3,432,322		3,432,322	2,971		211,178		211,178		
December	2015	147,687		3,580,009		3,580,009	0		211,178		211,178		
January	2016	-744,273		2,835,736		2,835,736	0		211,178		211,178		
February	2016	1,007,512		3,843,249		3,843,249	2,280		213,458		213,458		
March	2016	54,327		3,897,576		3,897,576	0		213,458		213,458		
April	2016	182,774		4,080,350		4,080,350	231		213,689		213,689		
May	2016	179,684		4,260,034		4,260,034	423		214,112		214,112		
June	2016	383,439		4,643,472		4,643,472	284		214,396		214,396	4,857,868	
July	2016	94,840		4,738,312		4,738,312	14,018		228,414	14,018	228,414	4,966,726	
August	2016	119,870		4,858,182		4,858,182	15,040		243,454	29,058	243,454	5,101,636	
September	2016	154,499		5,012,681		5,012,681	199		243,653	29,257	243,653	5,256,334	
October	2016	163,659		5,176,340		5,176,340	903		244,556	30,160	244,556	5,420,896	
November	2016	154,271		5,330,610		5,330,610	5,390		249,946	35,550	249,946	5,580,556	
December	2016	106,469		5,437,080		5,437,080	0		249,946		249,946	5,580,556	
January	2017	203,613		5,640,693		5,640,693	714		250,660		250,660	5,687,026	
February	2017	94,003		5,734,696		5,734,696	717		251,376		251,376	5,687,026	
March	2017	1,975		5,736,671		5,736,671	11,554		262,930		262,930	5,999,602	
April	2017	0		5,736,671		5,736,671	0		262,930		262,930	5,999,602	
May	2017	0		5,736,671		5,736,671	0		262,930		262,930	5,999,602	
June	2017	0		5,736,671		5,736,671	0		262,930		262,930	5,999,602	
July	2017	0		5,736,671		5,736,671	0		262,930		262,930	5,999,602	
August	2017	0		5,736,671		5,736,671	0		262,930		262,930	5,999,602	
September	2017	0		5,736,671		5,736,671	0		262,930		262,930	5,999,602	
October	2017	0		5,736,671		5,736,671	0		262,930		262,930	5,999,602	
November	2017	0		5,736,671		5,736,671	0		262,930		262,930	5,999,602	
December	2017	0		5,736,671		5,736,671	0		262,930		262,930	5,999,602	

# Appendix D.19 Non-residential Duct Testing and Sealing Program 2012-2018

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May 01 2019

Table 1		Capacity Savings											Energy Savings / Participant			Capacity Savings / Participant			
Month	Year	Net kW											Net kWh/Participant for TRP			Net kW/Participant for TRP			
		VA					NC					System	VA	NC	System	VA	NC	System	
		VA Monthly New	VA Monthly Retired	VA Cum. for IRP (New+Retired)	VA Rate Reset Adj.	VA Cum. for Net Lost Revenue (NLR)	NC Monthly New	NC Monthly Retired	NC Cum. for IRP (New + Retired)	NC Rate Reset Adj.	NC Cum. for Net Lost Revenue (NLR) (New + Retired + Rate Reset Adj.)	System Cum for IRP							
October	2012	0		0		0													
November	2012	0		0		0													
December	2012	7		7		7													
January	2013	2		10		10													
February	2013	0		10		10													
March	2013	3		13		13													
April	2013	5		18		18													
May	2013	10		28		28													
June	2013	5		33		33													
July	2013	33		66		66													
August	2013	40		106		106													
September	2013	78		184		184													
October	2013	62		246		246													
November	2013	44		290		290													
December	2013	182		472		472													
January	2014	18		490		490	0		0		0								
February	2014	95		586		586	0		0		0								
March	2014	118		704		704	0		0		0								
April	2014	203		907		907	0		0		0								
May	2014	119		1,026		1,026	0		0		0								
June	2014	123		1,149		1,149	0		0		0								
July	2014	274		1,423		1,423	0		0		0								
August	2014	160		1,583		1,583	0		0		0								
September	2014	189		1,772		1,772	0		0		0								
October	2014	220		1,992		1,992	0		0		0								
November	2014	256		2,248		2,248	55		55		55								
December	2014	103		2,350		2,350	5		60		60								
January	2015	192		2,542		2,542	42		102		102								
February	2015	170		2,712		2,712	1		103		103								
March	2015	139		2,851		2,851	2		105		105								
April	2015	200		3,051		3,051	93		198		198								
May	2015	72		3,123		3,123	31		229		229								
June	2015	368		3,491		3,491	51		280		280								
July	2015	120		3,611		3,611	23		303		303								
August	2015	292		3,904		3,904	17		320		320								
September	2015	259		4,163		4,163	0		320		320								
October	2015	130		4,292		4,292	4		324		324								
November	2015	178		4,470		4,470	3		326		326								
December	2015	182		4,652		4,652	0		326		326								
January	2016	161		4,813		4,813	0		326		326								
February	2016	116		4,929		4,929	8		335		335								
March	2016	144		5,072		5,072	0		335		335								
April	2016	164		5,236		5,236	1		335		335								
May	2016	90		5,325		5,325	1		337		337								
June	2016	303		5,628		5,628	2		338		338								
July	2016	228		5,856		5,856	57		396	57	396								
August	2016	300		6,156		6,156	63		459	121	459								
September	2016	206		6,363		6,363	1		460	121	460								
October	2016	209		6,571		6,571	2		461	123	461								
November	2016	291		6,863		6,863	11		473	134	473								
December	2016	164		7,027		7,027	0		473	134	473								
January	2017	432		7,459		7,459	3		476	137	476								
February	2017	201		7,660		7,660	1		476	137	476								
March	2017	3		7,663		7,663	46		522	183	522								
April	2017	0		7,663		7,663	0		522	183	522								
May	2017	0		7,663		7,663	0		522	183	522								
June	2017	0		7,663		7,663	0		522	183	522								
July	2017	0		7,663		7,663	0		522	183	522								
August	2017	0		7,663		7,663	0		522	183	522								
September	2017	0		7,663		7,663	0		522	183	522								
October	2017	0		7,663		7,663	0		522	183	522								
November	2017	0		7,663		7,663	0		522	183	522								
December	2017	0		7,663		7,663	0		522	183	522								

Appendix D.19 Non-residential Duct Testing and Sealing Program 2012-2018

		Participation										System
Month	Year	Program Participants					NC					System Cum for IRP
		VA		VA Cum. for IRP (New + Retired)	VA Rate Reset Adj. [B]	VA Cum. for Net Lost Revenue (NLR) (New + Retired + Rate Reset Adj.) [F] = Σ[A] + Σ[-A retired] + B	NC Monthly New	NC Monthly Retired	NC Cum. for IRP (New + Retired)	NC Rate Reset Adj.	NC Cum. for Net Lost Revenue (NLR) (New + Retired + Rate Reset Adj.)	
VA Monthly New	VA Monthly Retired	NC Monthly New	NC Monthly Retired									NC Cum. for IRP (New + Retired)
January	2018	0		4,444			0		250		25	4,694
February	2018	0		4,444			0		250		25	4,944
March	2018	0		4,444			0		250		25	5,194
April	2018	0		4,444			0		250		25	5,444
May	2018	0		4,444			0		250		25	5,694
June	2018	0		4,444			0		250		25	5,944
July	2018	0		4,444			0		250		25	6,194
August	2018	0		4,444			0		250		25	6,444
September	2018	0		4,444			0		250		25	6,694
October	2018	0		4,444			0		250		25	6,944
November	2018	0		4,444			0		250		25	7,194
December	2018	0		4,444			0		250		25	7,444

		Program Participants					System IRP
Year	VA IRP	VA NLR	NC IRP	NC NLR		System IRP	
2012	11	11	-	-		11	
2013	357	357	-	-		357	
2014	1,700	1,700	60	60		1,760	
2015	1,655	1,655	152	152		1,807	
2016	640	640	33	20		673	
2017	81	81	5	5		86	
2018	0	0	0	0		0	

		Program Participants					System IRP
Year	VA IRP	VA NLR	NC IRP	NC NLR		System IRP	
2012	11	11	-	-		11	
2013	357	357	-	-		357	
2014	1,700	1,700	60	60		1,760	
2015	1,655	1,655	152	152		1,807	
2016	640	640	33	20		673	
2017	81	81	5	5		86	
2018	0	0	0	0		0	

		Program Participants					System
Year	VA IRP	VA NLR	NC PPI			System	
2012	11	11	-			11	
2013	368	368	-			368	
2014	2,068	2,068	60			2,128	
2015	3,723	3,723	212			3,935	
2016	4,363	4,363	245			4,608	
2017	4,444	4,444	250			4,694	
2018	4,444	4,444	250			4,694	

		Program Participants					System IRP
Year	VA IRP	VA NLR	NC IRP	NC NLR		System IRP	
2012	11	11	-	-		11	
2013	368	368	-	-		368	
2014	2,068	2,068	60	60		2,128	
2015	3,723	3,723	212	212		3,935	
2016	4,363	4,363	245	20		4,608	
2017	4,444	4,444	250	25		4,694	
2018	4,444	4,444	250	0		4,694	

# Appendix D.19 Non-residential Duct Testing and Sealing Program 2012-2018

OFFICIAL COPY  
May 01 2019

Month	Year	Net kWh										
		VA					NC					System Cum for IRP
		VA Monthly New	VA Monthly Retired	VA Cum. for IRP (New + Retired)	VA Rate Reset Adj.	VA Cum. for Net Lost Revenue (NLR) (New + Retired + Rate Reset Adj.)	NC Monthly New	NC Monthly Retired	NC Cum. for IRP (New + Retired)	NC Rate Reset Adj.	NC Cum. for Net Lost Revenue (NLR) (New + Retired + Rate Reset Adj.)	
January	2018	0		5,736,671		5,736,671	0		262,930		48,535	
February	2018	0		5,736,671		5,736,671	0		262,930		48,535	
March	2018	0		5,736,671		5,736,671	0		262,930		48,535	
April	2018	0		5,736,671		5,736,671	0		262,930		48,535	
May	2018	0		5,736,671		5,736,671	0		262,930		48,535	
June	2018	0		5,736,671		5,736,671	0		262,930		48,535	
July	2018	0		5,736,671		5,736,671	0		262,930		48,535	
August	2018	0		5,736,671		5,736,671	0		262,930		48,535	
September	2018	0		5,736,671		5,736,671	0		262,930		48,535	
October	2018	0		5,736,671		5,736,671	0		262,930		48,535	
November	2018	0		5,736,671		5,736,671	0		262,930		48,535	
December	2018	0		5,736,671		5,736,671	0		262,930		48,535	

Net Incremental Energy (kWh)						
Year	VA IRP	VA NLR	NC IRP	NC NLR	System IRP	
2012	5,630	5,630	-	-	5,630	
2013	425,836	425,836	-	-	425,836	
2014	10,023,294	10,023,294	80,550	-	80,550	#####
2015	9,132,087	9,132,087	1,403,719	-	1,403,719	#####
2016	11,153,509	11,153,509	206,123	-	199,682	11,359,631
2017	3,497,145	3,497,145	131,988	-	131,988	3,629,134
2018	0	0	0	-	0	0

Net Annualized Energy (kWh)						
Year	VA IRP	VA NLR	NC IRP	NC NLR	System IRP	
2012	65,742	65,742	-	-	65,742	
2013	1,493,132	1,493,132	-	-	1,493,132	
2014	24,075,676	24,075,676	503,912	-	503,912	#####
2015	17,325,562	17,325,562	2,030,224	-	2,030,224	#####
2016	22,284,846	22,284,846	465,216	-	426,605	22,750,063
2017	3,995,098	3,995,098	155,813	-	155,813	3,750,912
2018	0	0	0	-	0	0

Net Energy (kWh) for PPI				
Year	VA IRP	VA NLR	NC IRP	NC PPI
2012				-
2013				-
2014			80,550	-
2015			1,907,631	-
2016			2,740,259	-
2017			2,627,428	-

Net Energy (kWh)					
Year	VA IRP	VA NLR	NC IRP	NC NLR	System IRP
2012	5,630	5,630	-	-	5,630
2013	491,578	491,578	-	-	491,578
2014	11,582,167	11,582,167	80,550	-	80,550
2015	34,766,637	34,766,637	1,907,631	-	1,907,631
2016	54,113,621	54,113,621	2,740,259	-	2,311,467
2017	68,742,104	68,742,104	3,131,341	-	558,594
2018	68,840,057	68,840,057	3,155,166	-	582,419

# Appendix D.19 Non-residential Duct Testing and Sealing Program 2012-2018

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May 01 2019

		Capacity Savings										Energy Savings / Participant			Capacity Savings / Participant			
Month	Year	Net kW					NC					System	Net kWh/Participant for IRP			Net kW/Participant for IRP		
		VA Monthly New	VA Monthly Retired	VA Cum. for IRP (New+Retired)	VA Rate Reset Adj.	VA Cum. for Net Lost Revenue (NLR)	NC Monthly New	NC Monthly Retired	NC Cum. for IRP (New + Retired)	NC Rate Reset Adj.	NC Cum. for Net Lost Revenue (NLR) (New + Retired + Rate Reset Adj.)		VA	NC	System	VA	NC	System
January	2018	0		7,663			0		522		183		1,291	1,052	1,278	1.72	2.09	1.74
February	2018	0		7,663			0		522		183		1,291	1,052	1,278	1.72	2.09	1.74
March	2018	0		7,663			0		522		183		1,291	1,052	1,278	1.72	2.09	1.74
April	2018	0		7,663			0		522		183		1,291	1,052	1,278	1.72	2.09	1.74
May	2018	0		7,663			0		522		183		1,291	1,052	1,278	1.72	2.09	1.74
June	2018	0		7,663			0		522		183		1,291	1,052	1,278	1.72	2.09	1.74
July	2018	0		7,663			0		522		183		1,291	1,052	1,278	1.72	2.09	1.74
August	2018	0		7,663			0		522		183		1,291	1,052	1,278	1.72	2.09	1.74
September	2018	0		7,663			0		522		183		1,291	1,052	1,278	1.72	2.09	1.74
October	2018	0		7,663			0		522		183		1,291	1,052	1,278	1.72	2.09	1.74
November	2018	0		7,663			0		522		183		1,291	1,052	1,278	1.72	2.09	1.74
December	2018	0		7,663			0		522		183		1,291	1,052	1,278	1.72	2.09	1.74

		Net Peak Demand (kW)						Incremental Energy Savings/Participant			Incremental Capacity Savings/Participant		
Year	Net Peak Demand (kW)	VA IRP	VA NLR	NC IRP	NC NLR	System IRP	Net kWh/Participant for IRP			Net kW/Participant for IRP			
							VA	NC	System	VA	NC	System	
2012	7	7	7	-	-	7	512	-	512	0.67	-	0.67	
2013	465	465	465	-	-	465	1,193	-	1,193	1.30	-	1.30	
2014	1,878	1,878	1,878	60	60	1,937	5,896	1,343	5,741	1.10	0.99	1.10	
2015	2,301	2,301	2,301	267	267	2,568	5,518	9,235	5,831	1.39	1.76	1.42	
2016	2,375	2,375	2,375	146	134	2,521	17,427	5,246	16,879	3.71	4.43	3.75	
2017	637	637	637	49	49	686	43,175	#####	42,199	7.86	9.86	7.98	
2018	0	0	0	0	0	0	-	-	-	-	-	-	

		Net Peak Demand (kW)						Annualized Energy Savings/Participant			Annualized Capacity Savings/Participant		
Year	Net Peak Demand (kW)	VA IRP	VA NLR	NC IRP	NC NLR	System IRP	Net kWh/Participant for IRP			Net kW/Participant for IRP			
							VA	NC	System	VA	NC	System	
2012	7	7	7	-	-	7	5,977	-	5,977	0.67	-	0.67	
2013	465	465	465	-	-	465	4,182	-	4,182	1.30	-	1.30	
2014	1,878	1,878	1,878	60	60	1,937	14,162	8,399	13,966	1.10	0.99	1.10	
2015	2,301	2,301	2,301	267	267	2,568	10,469	13,357	10,712	1.39	1.76	1.42	
2016	2,375	2,375	2,375	146	134	2,521	34,820	14,097	33,804	3.71	4.43	3.75	
2017	637	637	637	49	49	686	44,384	31,163	43,615	7.86	9.86	7.98	
2018	0	0	0	0	0	0	-	-	-	-	-	-	

		Net Peak Demand (kW)						PPI Energy Savings/Participant			PPI Capacity Savings/Participant		
Year	Net Peak Demand (kW)	VA	NC PPI	VA	NC	VA	Net kWh/Participant			Net kW/Participant			
							VA	NC	System	VA	NC	System	
2012	7	7	-	7	-	7	-	-	-	-	-	-	
2013	472	472	-	472	-	472	-	-	-	-	-	-	
2014	2,350	2,350	60	2,410	1,343	2,410	1,343	-	1,343	1.14	0.99	1.13	
2015	4,652	4,652	326	4,978	8,998	4,978	9,338	8,998	9,330	1.25	1.54	1.27	
2016	7,027	7,027	473	7,499	12,403	7,499	12,403	11,185	12,338	1.61	1.93	1.63	
2017	7,663	7,663	522	8,185	15,469	8,185	15,469	12,525	15,312	1.72	2.09	1.74	
2018	7,663	7,663	522	8,185	15,491	8,185	15,491	12,621	15,338	1.72	2.09	1.74	

		Net Peak Demand (kW)						IRP Energy Savings/Participant			IRP Capacity Savings/Participant		
Year	Net Peak Demand (kW)	VA IRP	VA NLR	NC IRP	NC NLR	System IRP	Net kWh/Participant			Net kW/Participant			
							VA	NC	System	VA	NC	System	
2012	7	7	7	-	-	7	512	-	512	0.67	-	0.67	
2013	472	472	472	-	-	472	1,336	-	1,336	1.28	-	1.28	
2014	2,350	2,350	2,350	60	60	2,410	5,601	1,343	5,481	1.14	0.99	1.13	
2015	4,652	4,652	4,652	326	326	4,978	9,338	8,998	9,330	1.25	1.54	1.27	
2016	7,027	7,027	7,027	473	473	7,499	12,403	11,185	12,338	1.61	1.93	1.63	
2017	7,663	7,663	7,663	522	522	8,185	15,469	12,525	15,312	1.72	2.09	1.74	
2018	7,663	7,663	7,663	522	522	8,185	15,491	12,621	15,338	1.72	2.09	1.74	

# Appendix D.20 Non-residential Energy Audit Program 2012-2018

PROGRAM: Non-Residential Energy Audit  
 DSM Phase II Program  
 Type: Energy Efficiency  
 Program Measure Life: 7.0 years

Table 1		Participation Program Participants										System
Month	Year	VA				NC				NC Rate Reset Adj. [D]	NC Cum. for Net Lost Revenue (NLR) (New + Retired + Rate Reset Adj.) [H] = Σ[C] + Σ[-C retired] + D	System Cum for IRP [E+G]
		VA Monthly New [A]	VA Monthly Retired [-A retired]	VA Cum. for IRP (New + Retired) [E] = Σ[A] + Σ[-A retired]	VA Rate Reset Adj. [B]	VA Cum. for Net Lost Revenue (NLR) (New + Retired + Rate Reset Adj.) [F] = Σ[A] + Σ[-A retired] + B	NC Monthly New [C]	NC Monthly Retired [-C retired]	NC Cum. for IRP (New + Retired) [G] = Σ[C] + Σ[-C retired]			
November	2012	0		0		0		0				
December	2012	1		1		1		1				
January	2013	0		0		0		0				
February	2013	0		0		0		0				
March	2013	0		0		0		0				
April	2013	0		0		0		0				
May	2013	26		26		26		26				
June	2013	7		34		34		34				
July	2013	2		36		36		36				
August	2013	3		39		39		39				
September	2013	6		45		45		45				
October	2013	88		133		133		133				
November	2013	72		205		205		205				
December	2013	98		303		303		303				
January	2014	54		357		357	0	357	0			
February	2014	72		429		429	0	429	0			
March	2014	31		460		460	0	460	0			
April	2014	70		530		530	0	530	0			
May	2014	136		666		666	0	666	0			
June	2014	41		707		707	0	707	0			
July	2014	52		759		759	0	759	0			
August	2014	114		873		873	0	873	0			
September	2014	207		1,080		1,080	0	1,080	0			
October	2014	145		1,225		1,225	2	1,225	2			
November	2014	174		1,399		1,399	14	1,399	16			
December	2014	20		1,419		1,419	0	1,419	16			
January	2015	20		1,439		1,439	0	1,439	16			
February	2015	16		1,455		1,455	0	1,455	16			
March	2015	7		1,462		1,462	0	1,462	16			
April	2015	2		1,464		1,464	0	1,464	16			
May	2015	0		1,464		1,464	0	1,464	16			
June	2015	0		1,464		1,464	1	1,464	17			
July	2015	17		1,481		1,481	17	1,481	34			
August	2015	10		1,491		1,491	60	1,491	94			
September	2015	0		1,491		1,491	0	1,491	94			
October	2015	0		1,491		1,491	0	1,491	94			
November	2015	0		1,491		1,491	0	1,491	94			
December	2015	1		1,492		1,492	0	1,492	94			
January	2016	6		1,498		1,498	0	1,498	94			
February	2016	1		1,499		1,499	0	1,499	94			
March	2016	0		1,499		1,499	0	1,499	94			
April	2016	0		1,499		1,499	0	1,499	94			
May	2016	1		1,500		1,500	0	1,500	94			
June	2016	7		1,507		1,507	0	1,507	94			1,601
July	2016	0		1,507		1,507	3	1,507	97	3		1,604
August	2016	11		1,518		1,518	7	1,518	104	10		1,622
September	2016	13		1,531		1,531	1	1,531	105	11		1,636
October	2016	29		1,560		1,560	3	1,560	108	14		1,668
November	2016	34		1,594		1,594	0	1,594	108	14		1,702
December	2016	23		1,617		1,617	0	1,617	108	14		1,725
January	2017	13		1,630		1,630	0	1,630	108	14		1,738
February	2017	1		1,631		1,631	1	1,631	109	15		1,753
March	2017	1		1,632		1,632	1	1,632	110	16		1,769
April	2017	0		1,632		1,632	0	1,632	110	16		1,785
May	2017	0		1,632		1,632	0	1,632	110	16		1,801
June	2017	0		1,632		1,632	0	1,632	110	16		1,817
July	2017	0		1,632		1,632	0	1,632	110	16		1,833
August	2017	0		1,632		1,632	0	1,632	110	16		1,849
September	2017	0		1,632		1,632	0	1,632	110	16		1,865
October	2017	0		1,632		1,632	0	1,632	110	16		1,881
November	2017	0		1,632		1,632	0	1,632	110	16		1,897
December	2017	0		1,632		1,632	0	1,632	110	16		1,913

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May 01 2019

# Appendix D.20 Non-residential Energy Audit Program 2012-2018

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May 01 2019

Table 1		Energy Savings										
Month	Year	VA				NC				System Cum for IRP		
		VA Monthly New	VA Monthly Retired	VA Cum. for IRP (New + Retired)	VA Rate Reset Adj.	VA Cum. for Net Lost Revenue (NLR) (New + Retired + Rate Reset Adj.)	NC Monthly New	NC Monthly Retired	NC Cum. for IRP (New + Retired)		NC Rate Reset Adj.	NC Cum. for Net Lost Revenue (NLR) (New + Retired + Rate Reset Adj.)
November	2012	0		0		0						
December	2012	2,878		2,878		2,878						
January	2013	0		2,878		2,878						
February	2013	0		2,878		2,878						
March	2013	0		2,878		2,878						
April	2013	0		2,878		2,878						
May	2013	13,873		16,751		16,751						
June	2013	1,555		18,306		18,306						
July	2013	3		18,309		18,309						
August	2013	82		18,391		18,391						
September	2013	166		18,557		18,557						
October	2013	134,241		152,797		152,797						
November	2013	66,268		219,066		219,066						
December	2013	47,895		266,961		266,961						
January	2014	136,410		403,371		403,371	0		0			
February	2014	148,681		552,052		552,052	0		0			
March	2014	11,801		563,853		563,853	0		0			
April	2014	272,405		836,258		836,258	0		0			
May	2014	153,357		989,614		989,614	0		0			
June	2014	83,188		1,072,802		1,072,802	0		0			
July	2014	139,267		1,212,070		1,212,070	0		0			
August	2014	74,521		1,286,590		1,286,590	0		0			
September	2014	376,592		1,663,182		1,663,182	0		0			
October	2014	130,550		1,793,732		1,793,732	5,452		5,452		5,452	
November	2014	856,785		2,650,518		2,650,518	35,192		40,644		40,644	
December	2014	34,249		2,684,766		2,684,766	0		40,644		40,644	
January	2015	24,367		2,709,133		2,709,133	0		40,644		40,644	
February	2015	17,323		2,726,457		2,726,457	0		40,644		40,644	
March	2015	3,675		2,730,131		2,730,131	0		40,644		40,644	
April	2015	20		2,730,152		2,730,152	0		40,644		40,644	
May	2015	0		2,730,152		2,730,152	0		40,644		40,644	
June	2015	0		2,730,152		2,730,152	150		40,794		40,794	
July	2015	95		2,730,247		2,730,247	7,449		48,242		48,242	
August	2015	65		2,730,312		2,730,312	5,193		53,436		53,436	
September	2015	0		2,730,312		2,730,312	0		53,436		53,436	
October	2015	0		2,730,312		2,730,312	0		53,436		53,436	
November	2015	0		2,730,312		2,730,312	0		53,436		53,436	
December	2015	5		2,730,317		2,730,317	0		53,436		53,436	
January	2016	-491		2,729,826		2,729,826	0		53,436		53,436	
February	2016	8		2,729,834		2,729,834	0		53,436		53,436	
March	2016	0		2,729,834		2,729,834	0		53,436		53,436	
April	2016	0		2,729,834		2,729,834	0		53,436		53,436	
May	2016	3,871		2,733,705		2,733,705	0		53,436		53,436	
June	2016	187,661		2,921,366		2,921,366	0		53,436		53,436	
July	2016	9,027		2,930,393		2,930,393	0		53,436	0	53,436	
August	2016	41,133		2,971,526		2,971,526	164		53,600	164	53,600	3,025,126
September	2016	37,091		3,008,617		3,008,617	17		53,617	181	53,617	3,062,233
October	2016	38,106		3,046,723		3,046,723	11,559		65,176	11,740	65,176	3,111,899
November	2016	110,895		3,157,619		3,157,619	0		65,176	11,740	11,740	3,222,794
December	2016	90,358		3,247,977		3,247,977	9,391		74,567		21,131	3,322,543
January	2017	11,105		3,259,082		3,259,082	18,174		92,741		39,305	
February	2017	1,662		3,260,743		3,260,743	16,777		109,517		56,082	
March	2017	771		3,261,515		3,261,515	6,026		115,543		62,107	
April	2017	0		3,261,515		3,261,515	0		115,543		62,107	
May	2017	0		3,261,515		3,261,515	0		115,543		62,107	
June	2017	0		3,261,515		3,261,515	0		115,543		62,107	
July	2017	0		3,261,515		3,261,515	0		115,543		62,107	
August	2017	0		3,261,515		3,261,515	0		115,543		62,107	
September	2017	0		3,261,515		3,261,515	0		115,543		62,107	
October	2017	0		3,261,515		3,261,515	0		115,543		62,107	
November	2017	0		3,261,515		3,261,515	0		115,543		62,107	
December	2017	0		3,261,515		3,261,515	0		115,543		62,107	

# Appendix D.20 Non-residential Energy Audit Program 2012-2018

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May 01 2019

Table 1		Capacity Savings										Energy Savings / Participant			Capacity Savings / Participant				
Month	Year	Net kW VA				NC				System Cum for IRP	Net kWh/Participant for IRP			Net kW/Participant for IRP					
		VA Monthly New	VA Monthly Retired	VA Cum. for IRP (New+Retired)	VA Rate Reset Adj.	VA Cum. for Net Lost Revenue (NLR)	NC Monthly New	NC Monthly Retired	NC Cum. for IRP (New + Retired)		NC Rate Reset Adj.	NC Cum. for Net Lost Revenue (NLR) (New + Retired + Rate Reset Adj.)	VA	NC	System	VA	NC	System	
November	2012	0		0		0													
December	2012	10		10		10													
January	2013	0		10		10													
February	2013	0		10		10													
March	2013	0		10		10													
April	2013	0		10		10													
May	2013	20		30		30													
June	2013	2		32		32													
July	2013	0		32		32													
August	2013	0		32		32													
September	2013	0		33		33													
October	2013	415		448		448													
November	2013	200		648		648													
December	2013	94		743		743													
January	2014	202		945		945	0												
February	2014	209		1,154		1,154	0												
March	2014	17		1,171		1,171	0												
April	2014	378		1,549		1,549	0												
May	2014	214		1,764		1,764	0												
June	2014	114		1,878		1,878	0												
July	2014	194		2,072		2,072	0												
August	2014	107		2,179		2,179	0												
September	2014	165		2,344		2,344	0												
October	2014	48		2,392		2,392	7												
November	2014	56		2,448		2,448	48												
December	2014	21		2,469		2,469	0												
January	2015	5		2,474		2,474	0												
February	2015	1		2,475		2,475	0												
March	2015	0		2,476		2,476	0												
April	2015	0		2,476		2,476	0												
May	2015	0		2,476		2,476	0												
June	2015	0		2,476		2,476	0												
July	2015	0		2,476		2,476	11												
August	2015	0		2,476		2,476	9												
September	2015	0		2,476		2,476	0												
October	2015	0		2,476		2,476	0												
November	2015	0		2,476		2,476	0												
December	2015	0		2,476		2,476	0												
January	2016	0		2,476		2,476	0												
February	2016	0		2,476		2,476	0												
March	2016	0		2,476		2,476	0												
April	2016	0		2,476		2,476	0												
May	2016	5		2,481		2,481	0												
June	2016	254		2,735		2,735	0												
July	2016	12		2,747		2,747	0												
August	2016	56		2,803		2,803	0												
September	2016	50		2,853		2,853	0												
October	2016	52		2,905		2,905	16												
November	2016	151		3,055		3,055	0												
December	2016	122		3,178		3,178	13												
January	2017	15		3,193		3,193	35												
February	2017	3		3,196		3,196	33												
March	2017	1		3,197		3,197	12												
April	2017	0		3,197		3,197	0												
May	2017	0		3,197		3,197	0												
June	2017	0		3,197		3,197	0												
July	2017	0		3,197		3,197	0												
August	2017	0		3,197		3,197	0												
September	2017	0		3,197		3,197	0												
October	2017	0		3,197		3,197	0												
November	2017	0		3,197		3,197	0												
December	2017	0		3,197		3,197	0												

# Appendix D.20 Non-residential Energy Audit Program 2012-2018

Month	Year	Program Participants										
		VA					NC					System
		VA Monthly New	VA Monthly Retired	VA Cum. for IRP (New + Retired)	VA Rate Reset Adj. [B]	Revenue (NLR) (New + Retired + [F] = Σ[A] + Σ[-A retired] + B	NC Monthly New	NC Monthly Retired	NC Cum. for IRP (New + Retired)	NC Rate Reset Adj.	Revenue (NLR) (New + Retired +	System Cum for IRP
January	2018	0		1,632		1,632	0		110		16	1,742
February	2018	0		1,632		1,632	0		110		16	1,742
March	2018	0		1,632		1,632	0		110		16	1,742
April	2018	0		1,632		1,632	0		110		16	1,742
May	2018	0		1,632		1,632	0		110		16	1,742
June	2018	0		1,632		1,632	0		110		16	1,742
July	2018	0		1,632		1,632	0		110		16	1,742
August	2018	0		1,632		1,632	0		110		16	1,742
September	2018	0		1,632		1,632	0		110		16	1,742
October	2018	0		1,632		1,632	0		110		16	1,742
November	2018	0		1,632		1,632	0		110		16	1,742
December	2018	0		1,632		1,632	0		110		16	1,742

Year	VA IRP	VA NLR	NC IRP	NC NLR	System IRP
2012	1	1	-	-	1
2013	302	302	-	-	302
2014	1,116	1,116	16	16	1,132
2015	73	73	78	78	151
2016	125	125	14	14	139
2017	15	15	2	2	17
2018	0	0	0	0	0

Year	VA IRP	VA NLR	NC IRP	NC NLR	System IRP
2012	1	1	-	-	1
2013	302	302	-	-	302
2014	1,116	1,116	16	16	1,132
2015	73	73	78	78	151
2016	125	125	14	14	139
2017	15	15	2	2	17
2018	0	0	0	0	0

Year	NC PPI
2012	-
2013	-
2014	16
2015	94
2016	108
2017	94

Year	VA IRP	VA NLR	NC IRP	NC NLR	System IRP
2012	1	1	-	-	1
2013	303	303	-	-	303
2014	1,419	1,419	16	16	1,435
2015	1,492	1,492	94	94	1,586
2016	1,617	1,617	108	14	1,725
2017	1,632	1,632	110	16	1,742
2018	1,632	1,632	110	16	1,742

# Appendix D.20 Non-residential Energy Audit Program 2012-2018

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May 01 2019

Month	Year	Net kWh										
		VA					NC					System
		VA Monthly New	VA Monthly Retired	VA Cum. for IRP (New + Retired)	VA Rate Reset Adj.	Revenue (NLR) (New + Retired +)	NC Monthly New	NC Monthly Retired	NC Cum. for IRP (New + Retired)	NC Rate Reset Adj.	Revenue (NLR) (New + Retired +)	System Cum for IRP
January	2018	0		3,261,515		3,261,515	0		115,543		62,107	
February	2018	0		3,261,515		3,261,515	0		115,543		62,107	
March	2018	0		3,261,515		3,261,515	0		115,543		62,107	
April	2018	0		3,261,515		3,261,515	0		115,543		62,107	
May	2018	0		3,261,515		3,261,515	0		115,543		62,107	
June	2018	0		3,261,515		3,261,515	0		115,543		62,107	
July	2018	0		3,261,515		3,261,515	0		115,543		62,107	
August	2018	0		3,261,515		3,261,515	0		115,543		62,107	
September	2018	0		3,261,515		3,261,515	0		115,543		62,107	
October	2018	0		3,261,515		3,261,515	0		115,543		62,107	
November	2018	0		3,261,515		3,261,515	0		115,543		62,107	
December	2018	0		3,261,515		3,261,515	0		115,543		62,107	

Year	Net Incremental Energy (kWh)					
	VA IRP	VA NLR	NC IRP	NC NLR	System IRP	
2012	2,878	2,878	-	-	2,878	
2013	706,112	706,112	-	-	706,112	
2014	12,505,279	12,505,279	86,741	86,741	12,592,020	
2015	520,790	520,790	71,706	71,706	592,496	
2016	2,173,449	2,173,449	44,956	44,956	2,218,405	
2017	159,251	159,251	462,890	462,890	622,142	
2018	0	0	0	0	0	

Year	Net Annualized Energy (kWh/year)					
	VA IRP	VA NLR	NC IRP	NC NLR	System IRP	
2012	34,538	34,538	-	-	34,538	
2013	3,168,993	3,168,993	-	-	3,168,993	
2014	29,013,666	29,013,666	487,729	487,729	29,501,395	
2015	546,608	546,608	153,498	153,498	700,106	
2016	6,211,917	6,211,917	253,571	253,571	6,465,488	
2017	162,456	162,456	491,719	491,719	654,175	
2018	0	0	0	0	0	

Year	Net Energy (kWh) for PPI					
	VA IRP	VA NLR	NC IRP	NC NLR	System IRP	
2012						
2013						
2014			86,741			
2015			559,434			
2016			686,183			
2017			869,960			

Year	Net Energy (kWh)					
	VA IRP	VA NLR	NC IRP	NC NLR	System IRP	
2012	2,878	2,878	-	-	2,878	
2013	740,650	740,650	-	-	740,650	
2014	15,708,810	15,708,810	86,741	86,741	15,795,551	
2015	32,737,988	32,737,988	559,434	559,434	33,297,422	
2016	34,937,254	34,937,254	686,183	579,312	35,623,437	
2017	39,134,973	39,134,973	1,357,689	716,462	40,492,662	
2018	39,138,178	39,138,178	1,386,517	745,290	40,524,695	

# Appendix D.20 Non-residential Energy Audit Program 2012-2018

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May 01 2019

Month	Year	Capacity Savings										Energy Savings / Participant			Capacity Savings / Participant			
		Net kW										Net kWh/Participant for IRP			Net kW/Participant for IRP			
		VA Monthly New	VA Monthly Retired	VA Cum. for IRP (New+Retired)	VA Rate Reset Adj.	VA Cum. for Net Lost Revenue (NLR)	NC Monthly New	NC Monthly Retired	NC Cum. for IRP (New + Retired)	NC Rate Reset Adj.	Revenue (NLR) (New + Retired + System Cum for IRP)	VA	NC	System	VA	NC	System	
January	2018	0		3,197		3,197	0		184		109		1,998	1,050	1,939	1.96	1.68	1.94
February	2018	0		3,197		3,197	0		184		109		1,998	1,050	1,939	1.96	1.68	1.94
March	2018	0		3,197		3,197	0		184		109		1,998	1,050	1,939	1.96	1.68	1.94
April	2018	0		3,197		3,197	0		184		109		1,998	1,050	1,939	1.96	1.68	1.94
May	2018	0		3,197		3,197	0		184		109		1,998	1,050	1,939	1.96	1.68	1.94
June	2018	0		3,197		3,197	0		184		109		1,998	1,050	1,939	1.96	1.68	1.94
July	2018	0		3,197		3,197	0		184		109		1,998	1,050	1,939	1.96	1.68	1.94
August	2018	0		3,197		3,197	0		184		109		1,998	1,050	1,939	1.96	1.68	1.94
September	2018	0		3,197		3,197	0		184		109		1,998	1,050	1,939	1.96	1.68	1.94
October	2018	0		3,197		3,197	0		184		109		1,998	1,050	1,939	1.96	1.68	1.94
November	2018	0		3,197		3,197	0		184		109		1,998	1,050	1,939	1.96	1.68	1.94
December	2018	0		3,197		3,197	0		184		109		1,998	1,050	1,939	1.96	1.68	1.94

Year	Net Peak Demand (kW)						Incremental Energy Savings/Participant kWh/Parti			Incremental Capacity Savings/Participant kW/Partic		
	VA IRP	VA NLR	NC IRP	NC NLR	System IRP	VA	NC	System	VA	NC	System	
2012	10	10	-	-	10	2,878	-	2,878	9.80	-	9.80	
2013	733	733	-	-	733	2,338	-	2,338	2.43	-	2.43	
2014	1,726	1,726	56	56	1,782	11,205	5,421	11,124	1.55	3.48	1.57	
2015	7	7	20	20	27	7,134	919	3,924	0.09	0.26	0.18	
2016	702	702	29	29	730	17,388	3,211	15,960	5.61	2.04	5.26	
2017	19	19	80	80	99	10,617	231,445.19	36,597	1.29	39.95	5.84	
2018	0	0	0	0	0	-	-	-	-	-	-	

Year	Net Peak Demand (kW)						Annualized Energy Savings/Participant kWh/Parti			Annualized Capacity Savings/Participant kW/Partic		
	VA IRP	VA NLR	NC IRP	NC NLR	System IRP	VA	NC	System	VA	NC	System	
2012	10	10	-	-	10	34,538	-	34,538	9.80	-	9.80	
2013	733	733	-	-	733	10,493	-	10,493	2.43	-	2.43	
2014	1,726	1,726	56	56	1,782	25,998	30,483	26,061	1.55	3.48	1.57	
2015	7	7	20	20	27	7,488	1,968	4,636	0.09	0.26	0.18	
2016	702	702	29	29	730	49,695	18,112	46,514	5.61	2.04	5.26	
2017	19	19	80	80	99	10,830	245,859	38,481	1.29	39.95	5.84	
2018	0	0	0	0	0	-	-	-	-	-	-	

Year	Net Peak Demand (kW)						PPI Energy Savings/Participant Net kWh/Participant			PPI Capacity Savings/Participant Net kW/Participant		
	VA IRP	VA NLR	NC IRP	NC NLR	System IRP	VA	NC	System	VA	NC	System	
2012	10	10	-	-	10	-	-	-	-	-	-	
2013	743	743	-	-	743	-	-	-	-	-	-	
2014	2,469	2,469	56	56	2,525	11,070	5,421	11,007	1.74	3.48	1.76	
2015	2,476	2,476	76	76	2,552	21,942	5,951	20,995	1.66	0.81	1.61	
2016	3,178	3,178	105	105	3,282	21,606	6,354	20,651	1.97	0.97	1.90	
2017	3,197	3,197	184	184	3,382	23,980	12,343	23,245	1.96	1.68	1.94	
2018	3,197	3,197	184	184	3,382	23,982	12,605	23,263	1.96	1.68	1.94	

Year	Net Peak Demand (kW)						IRP Energy Savings/Participant kWh/Parti			IRP Capacity Savings/Participant kW/Partic		
	VA IRP	VA NLR	NC IRP	NC NLR	System IRP	VA	NC	System	VA	NC	System	
2012	10	10	-	-	10	2,878	-	2,878	9.80	-	9.80	
2013	743	743	-	-	743	2,444	-	2,444	2.45	-	2.45	
2014	2,469	2,469	56	56	2,525	11,070	5,421	11,007	1.74	3.48	1.76	
2015	2,476	2,476	76	76	2,552	21,942	5,951	20,995	1.66	0.81	1.61	
2016	3,178	3,178	105	105	3,282	21,606	6,354	20,651	1.97	0.97	1.90	
2017	3,197	3,197	184	184	3,382	23,980	12,343	23,245	1.96	1.68	1.94	
2018	3,197	3,197	184	184	3,382	23,982	12,605	23,263	1.96	1.68	1.94	



## APPENDIX E. GLOSSARY OF TERMS

Below is a list of selected key terms used in energy efficiency impact evaluation. All terms below are from the Glossary of Terms (Version 1.0): A Project of the Regional Evaluation, Measurement and Verification Forum, Mar. 2009. Prepared by Paul Horowitz of PAH Associates for the Northeast Energy Efficiency Partnerships.

**Assumed Error Ratio** – The strength of the association between the actual value and the estimated value. It is the primary driver of the sample size required to satisfy a given confidence interval.

**Coincidence Factor** - The ratio, expressed as a numerical value or as a percentage, of the simultaneous maximum demand within a specified period of a group of electrical appliances or consumers within a specified period, to the sum of their individual maximum demands within the same period.

**Confidence** - An indication of how close, expressed as a probability, the true value of the quantity in question is within a specified distance to the estimate of the value. Confidence is the likelihood that the evaluation has captured the true value of a variable within a certain estimated range. Also see Precision.

**Deemed Savings** - An estimate of energy or demand savings for a single unit<sup>1</sup> of an installed energy efficiency measure that (a) has been developed from data sources and analytical methods that are widely considered acceptable for the measure and purpose, and (b) is applicable to the situation being evaluated. Individual parameters or calculation methods can also be deemed.

**Energy Efficiency Measure** - An installed piece of equipment or system, or modification of equipment, systems, or operations on end-use customer facilities that reduces the total amount of electrical energy and capacity that would otherwise have been needed to deliver an equivalent or improved level of end-use service.

**Evaluation, Measurement and Verification (EM&V)** - A subset of program impact evaluation that is associated with the documentation of energy savings at individual sites or projects using one or more methods that can involve measurements, engineering calculations, statistical analyses, and/or computer simulation modeling.

**Ex Ante Savings Estimate** - Forecasted savings used for program and portfolio planning purposes.

**Ex Post Savings Estimate** - Savings estimate reported by an evaluator after the energy impact evaluation has been completed.

**Free Driver** - A program non-participant who has adopted a particular efficiency measure or practice as a result of the evaluated program. Also see Spillover.

**Free-Rider** - A program participant who would have implemented the program measure or practice in the absence of the program. Free-riders can be (1) total, in which the participant's activity would have completely replicated the program measure; (2) partial, in which the participant's activity would have

partially replicated the program measure; or (3) deferred, in which the participant's activity would have completely replicated the program measure, but at a future time than the program's timeframe.

**Free-Ridership Rate** - The percent of savings attributable to free-riders.

**Gross Savings** - The change in energy consumption and/or demand that results directly from program-related actions taken by participants in an efficiency program, regardless of why they participated.

**Impact Evaluation** - An evaluation of the program-specific measures directly induced quantitative changes (e.g., kWh, kW) attributable to an energy efficiency program.

**Load Shapes** - Representations such as graphs, tables, and databases that show the time-of-use pattern of customer or equipment energy use. These are typically shown over a 24 hour or whole year (8760 hours) period.

**Model Based Statistical Sampling** - MBSS™ methodology is used to develop efficient sample designs and to assess the likely statistical precision.

**Net Savings** - The total change in load that is attributable to an energy efficiency program. This change in load may include, implicitly or explicitly, the effects of free drivers, free-riders, energy efficiency standards, changes in the level of energy service, and other causes of changes in energy consumption or demand.

**Peak Demand** - The maximum level of metered demand during a specified period, such as a billing month or a peak demand period.

**Peak Load** - The highest electrical demand within a particular period of time. Daily electric peaks on weekdays typically occur in late afternoon and early evening. Annual peaks typically occur on hot summer days.

**Precision** - The indication of the closeness of agreement among repeated measurements of the same physical quantity. It is also used to represent the degree to which an estimated result in social science (e.g. energy savings) would be replicated with repeated studies.

**Prescriptive Program** - An energy efficiency program focused on measures that are one-for-one replacements of the existing equipment and for which fixed customer incentives can be developed based on the anticipated similar savings that will accrue from their installation.

**Program Participant** - A consumer that received a service offered through an efficiency program in a given program year. The term "service" can be one or more of a wide variety of services, including financial rebates, technical assistance, product installations, training, energy efficiency information or other services, items, or conditions.

**Realization Rate** - The term is used in several contexts in the development of reported program savings. The primary applications include the ratio of project tracking system savings data (e.g., initial estimates of project savings) to savings (1) adjusted for data errors, (2) that incorporate evaluated or verified results of the tracked savings, and (3) that account for free-ridership and/or spillover.

**Representative Sample** - A sample that has approximately the same distribution of characteristics as the population from which it was drawn.

**Sampling Error** - The error that is caused by observing a sample and not the entire population.

**Spillover** - Reductions in energy consumption and/or demand caused by the presence of an energy efficiency program, beyond the program-related gross savings of the participants and without financial or technical assistance from the program.

**Standard Error** - A measure of the variability in a data sample, how far a "typical" data point is from the mean of a sample. In a large sample, about 2/3 of observations lie within one standard error of the mean, and 95% of observations lie within two standard errors.

**Stratified Ratio Estimation** - A sampling method that combines a stratified sample design with a ratio estimator to reduce the coefficient of variation by using the correlation of a known measure for the unit (e.g., expected energy savings) to stratify the population and allocate sample from strata for optimal sampling.

**Verification** - An independent assessment of the reliability (considering completeness and accuracy) of claimed energy savings