### Forest Bradley-Wright

4532 Bancroft Dr. New Orleans, LA 70122 (504) 208-7597; forest@forestwright.com

Docket E-7, Sub 1230 FBW Exhibit 1

#### PROFESSIONAL EXPERIENCE

**Energy Efficiency Director:** Southern Alliance for Clean Energy, Knoxville, TN **April 2018 – Present** 

• Regulatory filings, testimony, strategy, and stakeholder management on integrated resource planning, energy efficiency program design, cost recovery and related matters throughout the Southeast.

**Senior Policy Director:** Alliance for Affordable Energy, New Orleans, LA **February 2017 – April 2018** 

• Regulatory filings, strategy, and stakeholder management on integrated resource planning and energy efficiency rulemaking, power plant proposals and related matters at the city and state level.

**Consultant:** Utility Regulation and Energy Policy

**December 2014 – February 2017** 

• Technical and strategic guidance on clean energy policy and utility regulation for Opower, Gulf States Renewable Energy Industries Association, the Alliance, and Mississippi PSC candidate Brent Bailey.

**Candidate:** Louisiana Public Service Commission

July - December 2014

- Won the open primary and secured 49.15% of the vote in the general election against a highly favored, well-funded incumbent.
- Raised nearly \$500,000 in campaign contributions while publicly pledging not to accept money from monopoly companies regulated by the PSC.
- Campaign focused on ethical leadership, reducing bills, energy efficiency, the rights of customers to generate solar energy, and government transparency.

Utility Policy Director: Alliance for Affordable Energy, New Orleans, LA

October 2005 – June 2014

- Directed successful policy efforts for energy efficiency, renewable energy, and integrated resource planning at the Louisiana PSC and New Orleans City Council, spurring every major Louisiana utility investment in clean energy over the past decade.
- Reviewed and filed intervenor comments, met with commissioners, utilities, and technical consultants, assembled and managed relationships with a broad coalition of stakeholders, worked with media, and served as the organization's public face.
- Launched and managed energy efficiency and solar workforce training programs, public education campaigns, and direct service projects to improve energy performance in over 100 homes following the city's rebuild post-Katrina.

<u>Owner and Director</u>: EcoPark LLC (d.b.a. The Building Block), New Orleans, LA <u>February 2008 – Present</u> Created an innovative co-location business center to serve as a catalyst for moving green commerce and social entrepreneurship to the mainstream.

• Developed the business concept and plan, brought initial funding to the project, hired staff, established brand identity, and secured tenants.

Sustainable Development Team Facilitator: Shell International, New Orleans, LA May 2001 – June 2004

- Worked to facilitate a paradigm shift within corporate management's core business practices toward social and environmental issue management.
- Engaged a diverse team of professionals across the company to identify energy and resource inefficiencies and methods to reduce carbon emissions from venting and flaring in oil and natural gas exploration and production.
- Analyzed ways to incorporate sustainability accounting into each stage of new venture development for major drilling projects.

#### **EDUCATION**

#### **Tulane University**

- Master of Arts in Latin American Studies, 2011
   Concentration in environmental law, business, and international development
- Bachelor of Arts with Honors in Latin American Studies, 2001

#### **EXPERT WITNESS TESTIMONY**

Forest Bradley-Wright, Direct Testimony on Behalf of Southern Alliance for Clean Energy and League of United Latin American Citizens. Docket Nos. 20190015-EG, 20190016-EG, 20190018-EG, 20190019-EG, 20190020-EG, 20190021-EG- Commission Review of Numeric Conservation Goals for Florida Power & Light, Gulf Power Company, Duke Energy Florida, Orlando Utilities Commission, Jacksonville Electric Authority, Tampa Electric Company. June 10<sup>th</sup>, 2019.

Forest Bradley-Wright, Direct Testimony on Behalf of Southern Alliance for Clean Energy and North Carolina Justice Center, Application of Duke Energy Carolinas, LLC for Approval of Demand-Side Management and Energy Efficiency Cost Recovery Rider Pursuant to N.C.G.S. §62-133.9 and Commission Rule R8-69; Docket No. E-7, Sub 1192. May 20<sup>th</sup>, 2019.

Forest Bradley-Wright, Direct Testimony on Behalf of Southern Alliance for Clean Energy, Georgia Power Company's Application for the Certification, Decertification, and Amended Demand Side Management Plan, Docket No. 42311. April 25<sup>th</sup>, 2019.

#### **OTHER REGULATORY FILINGS**

Forest Bradley-Wright, Comments on Behalf of Southern Alliance for Clean Energy, Order Establishing Docket to Investigate the Development and Implementation of an Integrated Resource Planning Rule – MPSC Docket 2018-AD-64. February 15<sup>th</sup>, 2019

Forest Bradley-Wright and Daniel Brookeshire, Comments on Behalf of North Carolina Sustainable Energy Association and Southern Alliance for Clean Energy, Duke Energy Progress, LLC's Proposed Non-Profit Low-Income Weatherization Pay for Performance Pilot, Docket No. E-2, Sub 1187. November 9<sup>th</sup>, 2018

Forest Bradley-Wright, Comments on Behalf of Southern Alliance for Clean Energy, Order Establishing Docket to Investigate the Development and Implementation of an Integrated Resource Planning Rule – MPSC Docket 2018-AD-64. August 1<sup>st</sup>, 2018

Forest Bradley-Wright and Logan Burke, Comments on Behalf of Alliance for Affordable Energy, Rulemaking to Study the Possible Development of Financial Incentives for the Promotion of Energy Efficiency by Jurisdictional Electric and Natural Gas Utilities, Louisiana Public Service Commission Docket R-31106. June 20<sup>th</sup>, 2017

Forest Bradley-Wright and Logan Burke, Comments on Behalf of Alliance for Affordable Energy, Rulemaking to Establish Integrated Resource Planning Components and Reporting Requirements for Entergy New Orleans, Docket No. UD-17-01. May 25<sup>th</sup>, 2017

Forest Bradley-Wright and Logan Burke, Comments on Behalf of Alliance for Affordable Energy, Rulemaking to Study the Possible Development of Financial Incentives for the Promotion of Energy Efficiency by Jurisdictional Electric and Natural Gas Utilities, Louisiana Public Service Commission Docket R-31106. March 7<sup>th</sup>, 2017

Forest Bradley-Wright and Jeff Cantin, Post Hearing Brief on Behalf of Gulf States Renewable Energy Industries Association, Petition for a Certificate of Convenience and Necessity for Alabama Power, Docket No. 32382. August 19<sup>th</sup>, 2015

#### **PUBLICATIONS**

Forest Bradley-Wright and Heather Pohnan, <u>Energy Efficiency in the Southeast 2019 Annual Report</u>, Southern Alliance for Clean Energy. January 21<sup>st</sup>, 2020

Forest Bradley-Wright and Heather Pohnan, <u>Energy Efficiency in the Southeast 2018 Annual Report</u>, Southern Alliance for Clean Energy. December 12<sup>th</sup>, 2018

Docket E-7, Sub 1230 FBW Exhibit 2

SACE Docket No. E-7, Sub 1230 DSM/EE Rider SACE Data Request No. 1 Item No. 1-14 Page 1 of 1

### **DUKE ENERGY CAROLINAS**

#### **Request:**

Please provide a calculation of DSM/EE portfolio savings with and without line loss (1) as percentage of total annual sales; and (2) as a percentage of annual sales to non-opt-out customers:

- a. for the year 2019 (as a percentage of 2018 retail sales); and
- b. forecasted for the year 2021 (as a result of forecasted 2020 sales).

#### **Response:**

Please refer to "CCL-SACE DR1-14.xlsx."



#### **Duke Energy Carolinas**

#### CCL\_SACE DR 1-14

2019 Incremental Energy Savings	794,856,771 kV	Wh Evans Exhibit 1 page 3 (2019) line 28 - adjusted for line loss
2019 Opt Out Electricity Sales - NC	20,042,218,854 kV	Wh Miller Exh 6, Line 8
2019 Opt Out Electricity Sales - SC	10,446,567,023 kV	Wh Exhibit 3 pg 1 of 2, Line 12
2018 System Retail Billed Electricity Sales	81,399,234 M	IWh 2018 RAC Report
2021 Incremental Energy Savings	715,710,984 kV	Wh Evans Exhibit 1 page 4 (2021) line 27 - adjusted for line loss
2021 Opt Out Electricity Sales - NC	20,419,288,797 kV	Wh Miller Exh 6, Line 12
2021 Opt Out Electricity Sales - SC	10,490,870,196 kV	Wh Exhibit 3 pg 1 of 2, Line 16
2020 System Retail Electricity Sales	80,141,016 M	IWh 2019 Fall Forecast, sales at meter
2020 System Netali Electricity Sales	80,141,010 101	2019 Fair Forecast, sales at meter

- 1. Please provide a calculation of DSM/EE portfolio savings with and without line loss (1) as a percentage of total annual sales; and (2) as a percentage of annual sales to non-opt-out customers:
- a. for the year 2019 (as a percentage of 2018 retail sales);

2019 Incremental Energy Savings	794,856.77 N	MWh
2018 System Retail Electricity Sales	81,399,234 N	MWh
Savings as % of 2018 Sales	0.98%	
2019 Incremental Energy Savings	794,856.77 N	MWh
2018 System Retail Electricity Sales, net of 2019 Opt Out	50,910,448 N	MWh
Savings as % of 2018 Sales, net of 2019 Opt Out	1.56%	

- 1. Please provide a calculation of DSM/EE portfolio savings with and without line loss (1) as a percentage of total annual sales; and (2) as a percentage of annual sales to non-opt-out customers:
- b. forecasted for the year 2021 (as a result of forecasted 2020 sales).

2021 Incremental Energy Savings	715,710.98	MWh
2020 System Retail Electricity Sales	80,141,016	MWh
Savings as % of 2020 Sales	0.89%	

S.C. Coastal Conservation League andSouthern Alliance for Clean Energy
Second Data Request
Public Service Commission of South Carolina Docket No. 2019-89-E
Item No. 2-2
Page 1 of 1

#### **DUKE ENERGY CAROLINAS, LLC**

#### Request:

2-2. Please provide a calculation of cumulative DSM/EE portfolio savings (1) as a percentage of total annual sales; and (2) as a percentage of annual sales to non-opt-out customers from 2014 through 2018, taking into account line loss.

**Response**: See Attachment CCL-SACE DR2-2.xlsx



### **Duke Energy Carolinas**

### CCL\_SACE DR 2-2

2014 Incremental Energy Savings 2014 Opt Out Electricity Sales - NC 2014 Opt Out Electricity Sales - SC 2013 System Retail Billed Electricity Sales	17,153,650,420 kWh w 9,992,960,564 kWh w	Year 2014 Exhibit 2 - line 31 adjusted for line loss workpapers workpapers 2013 RAC Report
2015 Incremental Energy Savings 2015 Opt Out Electricity Sales - NC 2015 Opt Out Electricity Sales - SC 2014 System Retail Billed Electricity Sales	17,296,168,323 kWh M 9,824,240,223 kWh E	Vear 2015 Exhibit 2 - line 32 adjusted for line loss  Willer Exhibit 6  Exhibit 3 pg 1 of 2  2014 RAC Report
2016 Incremental Energy Savings 2016 Opt Out Electricity Sales - NC 2016 Opt Out Electricity Sales - SC 2015 System Retail Billed Electricity Sales	17,541,642,770 kWh M 10,115,080,343 kWh E	Year 2016 Exhibit 2 - line 33 adjusted for line loss  Miller Exhibit 6  Exhibit 3 pg 1 of 2  2015 RAC Report
2017 Incremental Energy Savings 2017 Opt Out Electricity Sales - NC 2017 Opt Out Electricity Sales - SC 2016 System Retail Billed Electricity Sales	17,749,899,702 kWh N 10,211,024,604 kWh E	Year 2017 Exhibit 2 - line 33 adjusted for line loss Willer Exhibit 6 Exhibit 3 pg 1 of 2 2016 RAC report
2018 Incremental Energy Savings 2018 Opt Out Electricity Sales - NC 2018 Opt Out Electricity Sales - SC 2017 System Retail Billed Electricity Sales	18,347,183,120 kWh M 10,257,713,985 kWh E	Year 2018 Exhibit 2 - line 33 adjusted for line loss Willer Exh 6, Line 10 Exhibit 3 pg 1 of 2, Line 14 2017 RAC Report

# 2. Please provide a calculation of cumulative DSM/EE portfolio savings (1) as a percentage of total annual sales; and (2) as a percentage of annual sales to non-opt-out customers from 2014 through 2018, taking into account line loss.

2014 Incremental Energy Savings	508,689.32	MWh
2013 System Retail Electricity Sales	76,021,887	MWh
2013 System Retail Electricity Sales, net of 2014 Opt Out	48,875,276	
Savings as % of 2013 Sales	0.67%	
Savings as % of 2013 Sales, net of 2014 Opt Out	1.04%	
2015 Incremental Energy Savings	614,743.74	MWh
2014 System Retail Electricity Sales	78,277,836	MWh
2014 System Retail Electricity Sales, net of 2015 Opt Out	51,157,427	_
Savings as % of 2014 Sales	0.79%	
Savings as % of 2014 Sales, net of 2015 Opt Out	1.20%	
2016 Incremental Energy Savings	754,838.26	MWh
2015 System Retail Electricity Sales	79,056,620	MWh
2015 System Retail Electricity Sales, net of 2016 Opt Out	51,399,896	_
Savings as % of 2015 Sales	0.95%	
Savings as % of 2015 Sales, net of 2016 Opt Out	1.47%	

Docket E-7, Sub 1230 FBW Exhibit 4

SACE Docket No. E-7, Sub 1230 DSM/EE Rider SACE Data Request No. 1 Item No. 1-4 Page 1 of 1

### **DUKE ENERGY CAROLINAS**

#### **Request:**

For each program in DEC's DSM/EE portfolio, please provide UCT and TRC cost-effectiveness test scores with corresponding total costs and benefits for 2015, 2016, 2017, 2018, and 2019.

#### **Response:**

Please refer to "CCL-SACE - DR1-4.xlsx." Due to the availability of actual participant costs, calculations of historical TRC prior to 2018 are unavailable.



#### **CCL-SACE DR1-4**

# 1-4. For each program in DEC's DSM/EE portfolio, please provide UCT and TRC cost-effectiveness test scores with corresponding t Note: Due to the availability of actual participant costs, calculations of historical TRC prior to 2018 are unavailable.

Note: Minor variances in Total Portfolio NPV of AC and Program Costs due to rounding

	2014	
	NPV of AC	Program Cost
Appliance Recycling Program	1,763,411	1,515,867
Energy Efficiency Education	5,079,938	1,963,153
Energy Efficient Appliances and Devices	52,276,512	14,738,129
HVAC Energy Efficiency	7,061,500	4,786,807
Income Qualified Energy Efficiency and Weatherization Assistance	1,675,463	1,917,192
Multi-Family Energy Efficiency	5,306,321	1,442,533
Energy Assessments	12,827,575	3,605,737
My Home Energy Report	12,166,183	8,285,066
PowerManager	57,744,666	15,662,693
Non Residential Smart Saver Custom Technical Assessments	6,858,644	1,458,195
Non Residential Smart Saver Custom	49,908,871	8,136,712
Energy Management Information Services	-	74,855
Non Residential Smart Saver Energy Efficient Food Service Products	1,489,862	199,350
Non Residential Smart Saver Energy Efficient HVAC Products	5,224,765	815,339
Non Residential Smart Saver Energy Efficient Lighting Products	40,866,018	6,727,675
Non Residential Energy Efficient Pumps and Drives Products	3,629,866	584,874
Non Residential Energy Efficient ITEE	35,580	25,730
Non Residential Energy Efficient Process Equipment Products	660,330	89,809
Non Residential Smart Saver Performance Incentive		
Small Business Energy Saver	3,221,137	1,026,607
Smart Energy in Offices	934,385	1,156,497
Business Energy Report	-	-
EnergyWise for Business	-	-
PowerShare	55,293,377	15,520,492
Disallowed Costs from 2015 Program Cost Audit (Order E-7 Sub 1105, dated 8/25/16)		
Total Portfolio	324,024,404	89,733,312

### otal costs and benefits for 2015, 2016, 2017, 2018, and 2019

		2015 2016		2016		2017		2017
UCT	NPV of AC	Program Cost	UCT	NPV of AC	Program Cost	UCT	NPV of AC	Program Cost
1.16	1,901,321	1,537,241	1.24	59,758	(97,397)	-0.61	-	5,307
2.59	2,498,417	2,054,672	1.22	3,695,507	2,126,509	1.74	3,597,724	2,077,611
3.55	49,525,402	12,050,485	4.11	82,262,218	24,069,774	3.42	105,352,687	30,340,728
1.48	6,816,479	5,416,833	1.26	7,476,100	7,839,566	0.95	7,287,263	7,403,327
0.87	1,854,068	2,238,776	0.83	2,984,760	4,792,436	0.62	3,185,867	5,505,992
3.68	7,431,163	2,092,935	3.55	8,950,706	2,518,988	3.55	13,539,656	3,168,422
3.56	10,115,222	3,086,173	3.28	6,822,806	2,678,893	2.55	6,602,773	2,909,098
1.47	16,583,325	9,845,895	1.68	20,423,954	10,822,444	1.89	21,728,369	13,812,250
3.69	52,718,688	14,634,279	3.60	54,179,776	13,644,970	3.97	61,074,105	14,021,500
4.70	321,686	660,420	0.49	9,572,687	2,034,308	4.71	10,272,302	2,139,875
6.13	53,882,448	9,932,877	5.42	39,025,086	7,356,509	5.30	34,693,083	7,304,838
0.00	-	-		-	-		-	-
7.47	1,099,734	194,425	5.66	2,474,312	324,117	7.63	959,251	306,488
6.41	6,221,217	1,142,522	5.45	3,344,669	1,473,991	2.27	2,958,336	1,560,769
6.07	42,227,035	11,335,798	3.73	120,392,639	39,622,944	3.04	240,054,511	66,689,770
6.21	1,924,058	466,478	4.12	1,574,965	471,930	3.34	3,070,044	528,937
1.38	1,130,386	716,542	1.58	777,601	285,430	2.72	523	61,215
7.35	517,342	88,823	5.82	279,184	125,947	2.22	530,295	162,413
				-	35,670	0.00	8,958	320,559
3.14	47,989,975	13,968,790	3.44	55,685,830	15,360,852	3.63	63,169,894	17,350,972
0.81	1,666,306	1,463,240	1.14	1,843,559	1,061,729	1.74	1,067,480	891,010
	-	126,404	0.00	302,497	263,169	1.15	696	126,680
	11,248	1,549,305	0.01	574,590	470,304	1.22	2,530,761	2,484,618
3.56	48,383,622	15,779,050 (3,851)	3.07	43,889,394	14,291,024	3.07	41,482,644	13,316,535
3.61	354,819,144	110,378,109	3.21	466,592,598	151,574,107	3.08	623,167,221	192,488,915

			Participant	NPV Participant			-	
UCT	NPV of AC	Program Cost	Incentives	Costs (net)	UCT	TRC	NPV of AC	Program Cost
0.00	-	-	-				-	-
1.73	2,863,507	1,992,260	441,383	-	1.44	1.85	2,519,64	1,684,083
3.47	135,857,936	42,687,244	35,592,245	18,585,822	3.18	5.29	102,051,32	7 41,380,987
0.98	7,088,531	6,955,146	5,303,166	8,572,619	1.02	0.69	7,079,940	7,400,669
0.58	4,315,688	6,490,735	4,835,515	-	0.66	2.61	3,648,59	7,342,133
4.27	13,857,877	3,604,921	1,155,116	-	3.84	5.66	11,891,700	3,680,155
2.27	5,756,902	2,836,229	2,044,393	-	2.03	7.27	4,413,58	3,186,888
1.57	22,684,688	12,765,286	-	-	1.78	1.78	23,361,954	10,555,159
4.36	61,924,152	14,423,610	7,213,282	-	4.29	8.59	69,783,15	7 13,383,639
4.80	67,306	407,293	7,794	24,493	0.17	0.16	691,28	5 295,925
4.75	23,322,046	6,068,902	3,495,543	13,128,691	3.84	1.49	35,884,36	7 8,871,440
	-	-	-	-		-	-	-
3.13	431,679	235,605	172,207	332,863	1.83	1.09	364,22	7 339,904
1.90	2,810,168	1,620,748	1,418,533	1,481,662	1.73	1.67	4,481,91	1 2,207,760
3.60	146,534,847	25,872,380	22,136,715	53,989,440	5.66	2.54	97,967,602	20,829,118
5.80	1,617,749	277,785	221,861	360,094	5.82	3.89	510,41	189,123
0.01	3,025	36,875	3,528	2,491	0.08	0.08	1,038	3 44,323
3.27	226,725	67,509	51,787	49,376	3.36	3.48	310,293	3 119,811
0.03	1,671,793	479,610	279,680	1,420,247	3.49	1.03	2,238,180	784,949
3.64	46,832,942	15,977,993	14,439,122	22,510,536	2.93	1.95	25,661,729	9 11,418,264
1.20	143,285	219,748	-	-	0.65	0.65	-	-
0.01	-	-	-	-		-	-	-
1.02	2,279,967	3,062,816	595,564	-	0.74	0.92	2,728,428	3,686,451
3.12	36,012,817	12,922,977	12,213,583	-	2.79	50.77	42,072,382	13,019,606
3.24	516,303,632	159,005,671	111,621,017	120,458,335	3.25	3.08	437,661,769	150,420,388

Participant	NPV Participant		
Incentives	Costs (net)	UCT	TRC
495,935	512,554	1.50	1.48
34,642,993	26,575,132	2.47	3.06
5,311,650	7,107,099	0.96	0.77
5,590,035	5,662,865	0.50	0.49
1,008,869	1,171,249	3.23	3.09
192,776	286,787	1.38	1.35
-	-	2.21	2.21
7,654,406	-	5.21	12.18
165,648	750,359	2.34	0.78
5,987,025	17,933,319	4.04	1.72
-	-		-
251,163	481,683	1.07	0.64
1,950,484	2,318,458	2.03	1.74
16,543,407	35,295,763	4.70	2.48
102,810	159,597	2.70	2.08
19,591	1,192	0.02	0.04
99,668	128,437	2.59	2.09
402,997	1,711,020	2.85	1.07
10,040,202	15,796,578	2.25	1.49
-	-		-
-	-		-
884,345	-	0.74	0.97
12,288,629	-	3.23	57.56
103,632,631	115,892,092	2.91	2.69

SACE Docket No. E-7, Sub 1230 DSM/EE Rider SACE Data Request No. 1 Item No. 1-16 Page 1 of 1

### **DUKE ENERGY CAROLINAS**

#### **Request:**

For the years 2019, 2020(forecasted), and 2021 (forecasted), please identify the following:

- a. Total DSM non-residential opt-outs;
- b. Total EE non-residential opt outs; and
- c. Total non-residential sales.

#### **Response:**

Please see the attached Excel file for actual and forecasted opt out information.



DR 1-16 First Data Request to Duke Energy Carolinas, LLC

		DSN	VI
	Source:	Actual	Forecasted
		2019	2021
NC	Miller Exhibit 6	18,852,615,603	18,851,271,603
SC	R12 Exhibit 3 page 1	9,402,889,130	9,402,889,130
Total		28,255,504,733	28,254,160,733

EE	
Actual	Forecasted
2019	2021
20,042,218,854	20,419,288,797
10,446,567,023	10,490,870,196
30,488,785,877	30,910,158,993

Total Non-Residential Sales (kWh)			
Actual	Forecasted		
2019	2021		
36,550,697,769	35,749,634,396		
14,697,398,282	14,895,366,192		
51,248,096,051	50,645,000,588		

SACE Docket No. E-7, Sub 1230 DSM/EE Rider SACE Data Request No. 1 Item No. 1-2 Page 1 of 1

#### **DUKE ENERGY CAROLINAS**

#### **Request:**

Please provide the following information for each of Duke Energy Carolinas, LLC's ("DEC" or "the Company") Demand-Side Management ("DSM") and Energy Efficiency ("EE") programs, for 2015, 2016, 2017, 2018, and 2019, as well as estimates for 2020 and 2021. Please include and distinguish between all income-qualified programs and offerings; for the Income-Qualified Energy Efficiency and Weatherization Assistance Program, please provide information at the program level and separately for each of the program's offerings, Neighborhood Energy Saver ("NES"), Weatherization and Equipment Replacement Program ("WERP"), and Refrigerator Replacement Program ("RRP"). If DEC does not categorize the requested information as set forth below, please so indicate and provide the information as categorized by DEC.

- a. Program costs
- b. Any revenues generated by the program (e.g., fees charged to customers)
- c. Shareholder incentive
- d. Energy savings expressed in kilowatt-hours (kWh)
- e. Demand reduction expressed in kilowatts (kW)
- f. Lost revenues

#### **Response:**

Please refer to "CCL-SACE DR1-2 - NC.pdf", "CCL-SACE - DR1-2a - Vintage 2015-2021 PC by Category-NC View.xlsx," and "CCL-SACE DR 1-2 Low Income KWh kW LR.xlsx" for response.







#### First Data Request to Duke Energy Carolinas, LLC

South Carolina State Conference of the NAACP, South Carolina Coastal Conservation League, and Southern Alliance for Clean Energy South Carolina Public Service Commission Docket No. 2020-83-E April 17, 2020

1. Please provide the following information for each of Duke Energy Carolinas, LLC's ("DEC" or "the Company") Demand-Side Management ("DSM") and Energy Efficiency ("EE") programs, for 2015, 2016, 2017, 2018, and 2019, as well as estimates for 2020 and 2021. Please include and distinguish between all income-qualified programs and offerings; for the Income-Qualified Energy Efficiency and Weatherization Assistance Program, please provide information at the program level and separately for each of its offerings, the Neighborhood Energy Saver Program ("NES"), Weatherization and Equipment Replacement Program ("WERP"), and Refrigerator Replacement Program ("RRP"). If DEC does not categorize the requested information as set forth below, please so indicate and provide the information as categorized by DEC.

#### a. Program costs

Refer to "CCL-SACE - DR1-2a - Vintage 2015-2021 PC by Category-NC View.xlsx" for costs by category. Categorization for 2015 includes customer incentive, employee expense, labor, materials, other, outside labor, overtime and postage, while the categorization for 2016 through 2019 includes administrative, advertising, installation, measurement and verification, product development, product fulfillment, rebate and incentive and other costs. Categorization for the 2020 and 2021 forecast periods includes administration costs, implementation costs, incentives, other utility costs and measurement and verification costs.

b. Any revenues generated by the program (e.g., fees charged to customers)

No revenues have been generated by the programs.

#### c. Shareholder incentive

The NC view of system shareholder incentives for 2015, 2016, and 2020 are included in Evans Exhibit, 1 pg. 1-2 and pg. 5 of E-7, Sub 1192. Refer to Column C, "Earned Utility Incentive." 2017, 2018, 2019 and 2021 estimates are included in Evans Exhibit 1, pg. 1-4 of E-7, Sub 1230. Refer to the Column D, "Incentive."

The SC view of system shareholder incentives for 2015, 2016, and 2020 (estimate) are included in Year 2015 Exhibit 2, Year 2016 Exhibit 2, and Year 2020 Exhibit 2 of Docket 2019-89-E. Refer to the Column C, "Earned Utility Incentive." Incentives for years 2017, 2018, 2019 and 2021 (estimate) are included in Year 2017 Exhibit 2, Year 2018 Exhibit 2, Year 2019 Exhibit 2 and Year 2021 Exhibit 2 of Docket 2020-83-E. Refer to the Column D, "Incentive."

#### First Data Request to Duke Energy Carolinas, LLC

South Carolina State Conference of the NAACP, South Carolina Coastal Conservation League, and Southern Alliance for Clean Energy

South Carolina Public Service Commission Docket No. 2020-83-E April 17, 2020

Earned Utility Incentive	2015	2016	2017	2018	2019	2020	2021
North Carolina (System View)	28,169,497	36,418,438	49,809,308	41,339,396	33,457,516	28,050,720	27,126,188
North Carolina View (Allocated)	20,711,621	26,743,114	36,358,448	30,132,647	24,566,073	20,487,368	19,945,446
South Carolina (System View)	31,933,599	40,421,159	54,472,631	55,126,315	39,012,353	33,119,827	34,712,888
South Carolina View (Allocated)	8,410,491	10,693,175	14,658,779	14,901,268	10,328,376	8,768,632	9,146,754

- d. Energy savings expressed in kilowatt-hours (kWh), and
- e. Demand reduction expressed in kilowatts (kW)

Energy savings and demand reductions for 2015, 2016, 2017, 2018, 2019 and a forecast for 2020 and 2021 are included in columns labeled "System kW Reduction – Summer Peak" and "System Energy Reduction (kWh)" of the following schedules:

- North Carolina Evans Exhibit 1, page 1-2 and page 5, of E-7, Sub 1192 and Evans Exhibit 1, pages 1-4 of E-7, Sub 1230.
- South Carolina Year 2015 Exhibit 2, Year 2016 Exhibit 2, and Year 2020 Exhibit 2 of Docket Number 2019-89-E and Year 2017 Exhibit 2, Year 2018 Exhibit 2, Year 2019 Exhibit 2, and Year 2021 Exhibit 2 of Docket Number 2020-83-E.

State specific kWh and kW can be calculated by multiplying the system values by the column labeled "Retail kWh Sales Allocation Factor." Refer to "CCL-SACE DR 1-2 Low Income KWh kW LR.xlsx" for Low Income KWh and kW.

#### f. Lost revenues

NC lost revenues are included in Evans Exhibit 2 of E-7, Sub 1192 and Exhibit 2 of E-7, Sub 1230.

SC lost revenues are included in Rider 11 Exhibit 1 of Docket 2019-89-E and Rider 12 Exhibit 1 of Docket 2020-83-E.

Refer to "CCL-SACE DR 1-2 Low Income KWh kW LR.xlsx" for Low Income lost revenues.

2015 System Program Costs (North Carolina View) Duke Energy Carolina, LLC Total Program Cost Source: E-7, Sub 1164, Evans Exhibit 3

				Vintage 20	15 Program Cost b	y Category			
	Customer	Employee							Total Utility
	Incentive	Expense	Labor	Materials	Other	Outside Labor	Overtime	Postage	Costs
Appliance Recycling Program	582,101	402	72,063	594	132,989	745,556	-	3,538	1,537,241
Energy Education Program for Schools	494,750	1,547	52,769	590,884	163,622	751,100	-		2,054,672
Energy Efficient Appliances & Devices	9,869,905	5,752	109,653	44,165	1,265,087	283,389	-	472,533	12,050,485
HVAC EE Products & Services	3,979,150	14,947	118,539	6,487	424,460	865,290	-	7,960	5,416,833
Income-Qualified EE Products & Services	1,228,462	60,574	192,895	28,184	160,930	567,704	-	26	2,238,776
Multi-Family EE Products & Services	651,360	290	34,328	118,951	149,278	1,138,631	-	97	2,092,935
My Home Energy Report	-	9,125	92,922	8,977,332	703,047	63,467	-	-	9,845,895
Power Manager	5,407,391	19,220	304,384	1,918,204	1,049,205	5,867,650	-	68,224	14,634,279
Residential Energy Assessments	187,443	409	43,464	296,409	345,498	2,166,676	-	46,275	3,086,173
Total Residential	22,400,562	112,266	1,021,017	11,981,210	4,394,116	12,449,463	-	598,653	52,957,287
Business Energy Report	-	2,819	68,454	-	9,019	46,064	-	48	126,404
EnergyWise for Business	-	8,585	53,087	-	110,575	1,377,057	-	-	1,549,305
Non-Residential Smart Saver Custom Assessment	262,862	13,962	158,104	206,275	(86,857)	106,071	2	-	660,420
Non-Residential Smart Saver Custom Incentive	7,406,124	28,946	423,621	6,470	725,385	1,341,954	15	361	9,932,877
Non-Residential Smart Saver Food Service Products	162,256	698	3,270	53	14,282	13,834	-	32	194,425
Non-Residential Smart Saver HVAC	985,651	1,328	16,892	1,795	82,805	53,993	-	59	1,142,522
Non-Residential Smart Saver Lighting	9,691,843	10,004	211,502	5,553	827,726	588,195	747	229	11,335,798
Non-Residential Smart Saver Pumps & VFDs	363,886	1,171	15,734	292	34,269	51,117	-	9	466,478
Non-Residential Smart Saver Information Technology	634,811	555	7,223	137	51,669	22,144	-	3	716,542
Non-Residential Smart Saver Process Equipment	79,068	187	78	6	6,370	3,110	-	3	88,823
Power Share	14,507,238	6,453	46,861	3	1,266,686	(49,730)	-	1,537	15,779,050
Small Business Energy Saver	12,051,164	2,614	57,038	4,279	1,037,522	786,492	-	29,682	13,968,790
Smart Energy in Offices	466,638	17,743	250,021	13,871	105,905	609,061	-	-	1,463,240
Total Non-Residential	46,611,542	95,065	1,311,885	238,734	4,185,357	4,949,362	764	31,962	57,424,673
Disallowed Costs from 2015 Program Cost Audit (Order E-7 Sub 1105, dated 8/25/16)					(3,851)				(3,851
Total Program Costs	69,012,103	207,331	2,332,902	12,219,944	8,575,623	17,398,826	764	630,615	110,378,109

	Customer Incentive	Employee Expense	Labor	Materials	Other	Outside Labor	Overtime	Postage	Total Utility Costs
Income-Qualified EE Products & Services	1,228,462	60,574	192,895	28,184	160,930	567,704	-	26	2,238,776
Low Income Neighborhood	709,153.56	34,967.61	111,352.53	16,270	92,900	327,718	-	15	1,292,377
Low Income Weatherization Refrigerator Replacement	16,445.51	810.91	2,582.30	377	2,154	7,600	-	0	29,971
Low Income Weatherization	502,863.17	24,795.65	78,960.45	11,537	65,876	232,386	-	11	916,429

				Vintag	e 2015 Progra	m Cost by Cat	egory - NC Alloca	ation		
		Customer	Employee							Total Utility
IC Allocation		Incentive	Expense	Labor	Materials	Other	Outside Labor	Overtime	Postage	Costs
72.96%	Appliance Re	424,680	293	52,575	433	97,024	543,931	-	2,581	1,121,517
72.96%	Energy Educa	360,952	1,129	38,498	431,088	119,373	547,976	-	-	1,499,016
72.96%	Energy Efficie	7,200,734	4,196	79,999	32,221	922,963	206,751	-	344,744	8,791,608
72.96%	HVAC EE Proc	2,903,047	10,905	86,482	4,733	309,671	631,285	-	5,807	3,951,930
72.96%	Income-Quali	896,243	44,193	140,730	20,562	117,409	414,177	-	19	1,633,332
72.96%	Multi-Family	475,209	211	25,045	86,782	108,908	830,705	-	71	1,526,93
72.96%	My Home Ene	-	6,658	67,793	6,549,545	512,919	46,304	-	-	7,183,217
32.52%	Power Manag	6,476,608	11,142	131,496	623,837	789,132	2,339,941	-	22,688	10,394,843
72.96%	Residential Er	136,752	298	31,710	216,250	252,063	1,580,730	-	33,761	2,251,563
	Total Resider	18,874,226	79,024	654,327	7,965,451	3,229,461	7,141,799	-	409,670	38,353,95
72.96%	Business Ener	-	2,057	49,942	-	6,580	33,607	-	35	92,22
42.45%	EnergyWise for	-	8,302	91,162	-	82,695	3,168,577	-	-	1,213,06
72.96%	Non-Resident	191,775	10,186	115,347	150,491	(63,368)	77,386	2	-	481,81
72.96%	Non-Resident	5,403,247	21,118	309,059	4,720	529,215	979,042	11	263	7,246,67
72.96%	Non-Resident	118,376	510	2,385	38	10,420	10,093	-	23	141,84
72.96%	Non-Resident	719,096	969	12,324	1,309	60,411	39,391	-	43	833,54
72.96%	Non-Resident	7,070,827	7,299	154,304	4,051	603,879	429,126	545	167	8,270,19
72.96%	Non-Resident	265,478	854	11,479	213	25,002	37,293	-	6	340,32
72.96%	Non-Resident	463,136	405	5,270	100	37,696	16,155	-	2	522,76
72.96%	Non-Resident	57,685	137	57	4	4,648	2,269	-	2	64,80
42.45%	Power Share	8,453,434.54	6,240	80,470	814,248	947,301	(114,427)	#DIV/0!	29,613	12,354,55
72.96%	Small Busines	8,792,104	1,907	41,613	3,122	756,939	573,797	-	21,655	10,191,13
72.96%	Smart Energy	340,443	12,945	182,407	10,120	77,265	444,350	-	-	1,067,52
	Total Non-F	31,875,601	72,927	1,055,819	988,417	3,078,683	5,696,659	#DIV/0!	51,810	42,820,47
74.97%	Disallowed Co	-	-	-	-	(2,887)	-	-	-	(2,88
	Total Prog	50,749,827	151,951	1,710,145	8,953,868	6,305,257	12,838,458	#DIV/0!	461,479	81,171,54

	Customer	Employee							Total Utility
	Incentive	Expense	Labor	Materials	Other	Outside Labor	Overtime	Postage	Costs
Income-Quali	896,243	44,193	140,730	20,562	117,409	414,177	-	19	1,633,332
Low Income I	517,373	25,511	81,239	11,870	67,777	239,092	-	11	942,872
Low Income \	11,998	592	1,884	275	1,572	5,545		0	21,866
Low Income \	366,871	18,090	57,607	8,417	48,061	169,541	-	8	668,594

72.96% 72.96% 72.96% 72.96%

2016 System Program Costs (North Carolina View) Duke Energy Carolina, LLC Total Program Cost Source: E-7, Sub 1164, Evans Exhibit 3

				Vintage 2	2016 Program Cost by	Category				
	Administrative			Measurement and	Product	Product Fulfillment	Rebate and			NC
	Costs	Advertising	Installation Costs	Verification	Development Costs	Costs	Incentive Costs	Other	Total Utility Costs	Allocation
Appliance Recycling Program	(101,096)	12,132	-	10,010	-	-	(13,948)	(4,495)	(97,397)	73.10%
Energy Education Program for Schools	1.332.371	5.554	-	9.844	_	-	680.597	98.143	2,126,509	73.10%
Energy Efficient Appliances & Devices	3,634,377	1,467,918	-	60,585	1,221	-	17,794,804	1,110,869	24,069,774	73.10%
HVAC EE Products & Services	530,598	692,661	-	(50,609)	-	-	6,305,103	361,812	7,839,566	73.10%
Income-Qualified EE Products & Services	934,320	36.125	-	141,561	-	(6,456)	3,465,706	221,181	4,792,436	73.10%
Multi-Family EE Products & Services	1,507,276	68	-	101,779	-	-	793,608	116,256	2,518,988	73.10%
My Home Energy Report	144,403	9,972,133	-	142,848	14,981	48,601	-	499,478	10,822,444	73.10%
Power Manager	260,919	328,523	4,912,851	235,416	-	1,162,058	6,115,459	629,743	13,644,970	33.80%
Residential Energy Assessments	1,781,283	637,879	-	-	-	2	136,093	123,636	2,678,893	73.10%
Total Residential	10,024,454	13,152,994	4,912,851	651,433	16,202	1,204,205	35,277,423	3,156,623	68,396,185	
Business Energy Report	232,370	-	-	10,413	8,240	-	-	12,146	263,169	73.10%
EnergyWise for Business	1,009,948	103,901	561,558	10,716	(1,317,690)	-	80,165	21,705	470,304	40.82%
Non-Residential Smart Saver Custom Assessment	346,858	35,738	ī	70,232	-	-	1,487,593	93,887	2,034,308	73.10%
Non-Residential Smart Saver Custom Incentive	1,528,890	303,504	-	288,286	8,066	-	4,888,245	339,518	7,356,509	73.10%
Non-Residential Smart Saver Food Service Products	73,811	16,222	·	2,435	-	-	216,691	14,959	324,117	73.10%
Non-Residential Smart Saver HVAC	163,421	47,280	-	17,143	-	-	1,178,120	68,028	1,473,991	73.10%
Non-Residential Smart Saver Lighting	2,051,297	206,137	-	115,933	-	-	35,420,897	1,828,680	39,622,944	73.10%
Non-Residential Smart Saver Pumps & VFDs	49,964	12,091	-	30,202	-	-	357,893	21,781	471,930	73.10%
Non-Residential Smart Saver Information Technology	39,058	8,146	-	4,870	-	-	220,182	13,173	285,430	73.10%
Non-Residential Smart Saver Process Equipment	11,106	7,852	·	4,870	-	-	96,306	5,813	125,947	73.10%
Non-Residential Smart Saver Performance Incentive	17,613	12,539	-	-	3,872	-	-	1,646	35,670	73.10%
Power Share	272,166	8,583	(31)	29,696	-	-	13,321,050	659,560	14,291,024	40.82%
Small Business Energy Saver	852,198	101,754	-	112,632	-	-	13,585,332	708,935	15,360,852	73.10%
Smart Energy in Offices	167,956	10,105	430,355	46,837	549	-	356,925	49,001	1,061,729	73.10%
Total Non-Residential	6,816,656	873,851	991,882	744,266	(1,296,963)	-	71,209,400	3,838,831	83,177,922	
Total Program Costs	16,841,110	14,026,845	5,904,733	1,395,699	(1,280,762)	1,204,205	106,486,823	6.995.454	151,574,107	

	Administrative Costs	Advertising	Installation Costs	Measurement and Verification	Product Development Costs	Product Fulfillment Costs	Rebate and Incentive Costs	Other	Total Utility Costs
Income-Qualified EE Products & Services	934,320	36,125	-	141,561	-	(6,456)	3,465,706	221,181	4,792,436
Low Income Neighborhood	576,218	31,125		94,042		(6,456)	1,944,702	136,408	2,776,039
Low Income Weatherization Refrigerator Replacement	19,772	-		-			88,550	4,681	113,003
Low Income Weatherization	338,329	5,000		47,519			1,432,454	80,092	1,903,394

			Vintage 2016	Program Cos	t by Category	- NC Alloca	ntion		
	Administrati ve Costs	Advertising	Installation Costs	Measurem ent and Verification		Product Fulfillmen t Costs	Rebate and Incentive Costs	Other	Total Utility Costs
Appliance	(73,897)	8,868	-	7,317	-	-	(10,196)	(3,286)	(71,194)
Energy Edu	, , ,	4,060	-	7,195	-	-	497,491	71,739	1,554,399
Energy Effi		1,072,993	-	44,285	892	-	13,007,340	812,004	17,594,110
HVAC EE P	387,848	506,310	-	(36,993)	-	-	4,608,796	264,471	5,730,431
Income-Qu	682,953	26,406	-	103,476	-	(4,719)	2,533,302	161,675	3,503,093
Multi-Fam	1,101,763	50	-	74,396	-	-	580,098	84,979	1,841,287
My Home	105,554	7,289,259	-	104,417	10,950	35,526	-	365,100	7,910,805
Power Ma	521,504	149,049	1,850,195	93,223	(445,344)	392,745	6,596,118	443,086	9,600,575
Residentia	1,302,052	466,266	-	-	-	1	99,479	90,374	1,958,171
<b>Total Resid</b>	7,658,285	9,523,260	1,850,195	397,316	(433,501)	423,552	27,912,430	2,290,142	49,621,678
Business E	169,854	ļ	-	7,612	6,023	-	-	8,878	192,366
EnergyWis	496,118	166,270	2,234,582	29,853	(537,837)	-	47,652	17,049	369,407
Non-Resid	253,540	26,123	-	51,337	-	-	1,087,375	68,628	1,487,003
Non-Resid	1,117,561	221,850	-	210,727	5,896	-	3,573,125	248,175	5,377,335
Non-Resid	53,953	11,857	-	1,780	-	-	158,393	10,934	236,918
Non-Resid	119,455	34,560	-	12,531	-	-	861,162	49,726	1,077,433
Non-Resid	1,499,422	150,679	-	84,743	-	-	25,891,359	1,336,697	28,962,899
Non-Resid	36,522	8,838	-	22,076	-	-	261,607	15,921	344,963
Non-Resid	28,550	5,955	-	3,560	-	-	160,945	9,629	208,639
Non-Resid	8,118	5,739	-	3,560	-	-	70,396	4,249	92,062
Non-Resid	12,875	9,165	-	-	2,830	-	-	1,203	26,073
Power Sha	133,696	13,735	(124)	82,730	-	#DIV/0!	7,918,399	518,061	11,225,091
Small Busin	622,925	74,379	-	82,330	-	-	9,930,373	518,205	11,228,212
Smart Ene	122,769	7,386	314,574	34,236	402	-	260,899	35,818	776,084
Total No	4,675,359	736,535	2,549,031	627,074	(522,686)	#DIV/0!	50,221,685	2,843,172	61,604,485
							-		
Total P	12,333,644	10,259,796	4,399,226	1,024,390	(956,188)	#DIV/0!	78,134,115	5,133,314	111,226,163

	Administrati ve Costs	Advertising	Installation Costs	Measurem ent and Verification	Product Developme nt Costs	Product Fulfillmen t Costs	Rebate and Incentive Costs	Other	Total Utility Costs
Income-Qu	682,953	26,406	-	103,476	-	(4,719)	2,533,302	161,675	3,503,093
Low Incom	421,194	22,751	-	68,741	-	(4,719)	1,421,505	99,709	2,029,181
Low Incom	14,453	-	1	-	-	-	64,727	3,421	82,601
Low Incom	247,306	3,655	ì	34,735	-	-	1,047,071	58,545	1,391,311

73.10% 73.10% 73.10% 73.10%

2017 System Program Costs (North Carolina View) Duke Energy Carolina, LLC

Total Program Cost Source: E-7, Sub 1230, Evans Exhibit 3

				Vintage :	2017 Program Cost by	Category			
	Administrative Costs	Advertising	Installation Costs	Measurement and Verification	Product Development Costs	Product Fulfillment Costs	Rebate and	Other	Total Utility Costs
Analianas Daguelina Dagages	5,048	Advertising	Ilistaliation Costs	verilication	Development Costs		52	208	5,307
Appliance Recycling Program		25.262	-	8,885	316	-	621,479	81,135	
Energy Education Program for Schools Energy Efficient Appliances & Devices	1,340,534 3,343,210	25,262 1,037,877	-	206,171	5,296	-	24,564,685	1,183,489	2,077,611 30,340,728
HVAC EE Products & Services			-		5,296	-			
	351,596	1,185,047	-	158,501	-	-	5,421,355	286,829	7,403,327
Income-Qualified EE Products & Services	1,048,816	52,723	-	54,444	-	-	4,135,546	214,463	5,505,992
Multi-Family EE Products & Services	1,826,887	20,223	-	6,539	-	-	1,190,913	123,860	3,168,422
My Home Energy Report	686,596	12,554,962		10,725	-	19,698	-	540,268	13,812,250
Power Manager	218,842	117,393	5,253,434	75,532	-	1,271,781	6,745,840	338,677	14,021,500
Residential Energy Assessments	2,048,701	495,006	-	45,272	-	-	207,105	113,014	2,909,098
Total Residential	10,870,230	15,488,495	5,253,434	566,069	5,612	1,291,480	42,886,974	2,881,943	79,244,235
Business Energy Report	103,231	7,287	-	8,505	3,985	-	-	3,673	126,680
EnergyWise for Business	118,718	311,334	1,137,476	109,159	388,672	-	346,751	72,508	2,484,618
Non-Residential Smart Saver Custom Assessment	343,861	35,639	-	207,187	-	-	1,491,673	61,516	2,139,875
Non-Residential Smart Saver Custom Incentive	1,773,198	344,061	-	245,035	(13,336)	-	4,742,081	213,799	7,304,838
Non-Residential Smart Saver Food Service Products	43,785	10,951	1	2,255	1,888	-	238,574	9,036	306,488
Non-Residential Smart Saver HVAC	167,786	21,108	ī	86,714	2,975	-	1,236,788	45,398	1,560,769
Non-Residential Smart Saver Lighting	2,070,648	598,594	1	123,832	29,764	-	61,897,658	1,969,275	66,689,770
Non-Residential Smart Saver Pumps & VFDs	43,111	23,662	-	4,562	2,258	-	439,754	15,589	528,937
Non-Residential Smart Saver Information Technology	42,484	10,847	-	4,510	1,515	-	87	1,771	61,215
Non-Residential Smart Saver Process Equipment	8,901	7,474	-	16,064	268	-	125,039	4,666	162,413
Non Residential Smart Saver Performance Incentive	286,089	14,471	-	-	9,184	-	1,344	9,471	320,559
Power Share	278,121	140	-	22,190	-	-	12,694,300	321,784	13,316,535
Small Business Energy Saver	948,458	169,988	-	74,296	-	-	15,646,222	512,009	17,350,972
Smart Energy in Offices	456,984	121,516	76,657	149,566	-	=	61,194	25,094	891,010
Total Non-Residential	6,685,373	1,677,071	1,214,133	1,053,875	427,173	-	98,921,465	3,265,591	113,244,680
Total Program Costs	17,555,603	17,165,566	6,467,566	1,619,944	432,785	1,291,480	141,808,439	6,147,533	192,488,915

	Administrative Costs	Advertising	Installation Costs	Measurement and Verification	Product Development Costs	Product Fulfillment Costs	Rebate and	Other	Total Utility Costs
Income-Qualified EE Products & Services	1,048,816	52,723	-	54,444	-	-	4,135,546		5,505,992
Low Income Neighborhood	887,304	45,003		27,610			2,591,881	143,959	3,695,758
Low Income Weatherization Refrigerator Replacement	4,851	-		-			111,886	4,732	121,469
Low Income Weatherization	156,661	7,721		26,834			1,431,778	65,772	1,688,765

				Vintage 2017	Program Co	st by Catego	ry - NC Allo	cation		
					Measurem					
					ent and	Product	Product	Rebate and		
С		Administrati		Installation	Verificatio	Developme	Fulfillmen	Incentive		<b>Total Utility</b>
ation		ve Costs	Advertising	Costs	n	nt Costs	t Costs	Costs	Other	Costs
2.81%	Appliance	3,675	-	-	-	-	-	38	151	3,864
.81%	Energy Edu	976,026	18,393	-	6,469	230	-	452,491	59,073	1,512,683
.81%	Energy Effi	2,434,149	755,666	-	150,110	3,856	-	17,885,240	861,684	22,090,705
.81%	HVAC EE P	255,992	862,818	-	115,403	-	-	3,947,221	208,837	5,390,270
2.81%	Income-Qu	763,630	38,387	-	39,640	-	-	3,011,039	156,148	4,008,844
2.81%	Multi-Fam	1,330,134	14,724	-	4,761	-	-	867,089	90,181	2,306,888
2.81%	My Home	499,902	9,141,111	-	7,809	-	14,342	-	393,362	10,056,526
3.81%	Power Mai	208,146	144,989	2,160,607	69,941	131,400	429,958	6,689,455	247,799	10,082,296
2.81%	Residentia	1,491,634	360,408	-	32,962	-	-	150,790	82,284	2,118,078
	Total Resid	7,963,288	#######	2,160,607	427,095	135,486	444,300	33,003,363	2,099,519	57,570,155
2.81%	Business E	75,161	5,306	-	6,192	2,901	-	ı	2,674	92,234
.07%	EnergyWis	73,812	171,790	2,561,138	68,901	155,759	-	210,840	54,016	1,879,262
2.81%	Non-Resid	250,361	25,948	-	150,850	1	-	1,086,068	44,789	1,558,016
2.81%	Non-Resid	1,291,043	250,506	-	178,407	(9,710)	-	3,452,650	155,665	5,318,561
2.81%	Non-Resid	31,879	7,973	-	1,642	1,375	-	173,702	6,579	223,150
2.81%	Non-Resid	122,163	15,368	-	63,135	2,166	-	900,490	33,054	1,136,376
.81%	Non-Resid	1,507,613	435,829	-	90,161	21,670	-	45,066,912	1,433,805	48,555,988
.81%	Non-Resid	31,389	17,228	-	3,322	1,644	-	320,180	11,350	385,112
.81%	Non-Resid	30,932	7,898	-	3,283	1,103	-	64	1,290	44,570
.81%	Non-Resid	6,480	5,442	-	11,696	195	-	91,039	3,397	118,251
.81%	Non-Resid	208,298	10,536	-	-	6,687	-	979	6,895	233,395
.07%	Power Sha	172,920	77	-	14,006	-	-	7,718,698	239,719	10,072,076.70
.81%	Small Busin	690,560	123,766	-	54,094	-	-	11,391,818	372,787	12,633,026
.81%	Smart Ener	332,724	88,474	55,813	108,897	-	-	44,554	18,270	648,734
	Total No	4,825,336	1,166,141	2,616,951	754,587	183,791	-	70,457,994	2,384,292	82,898,754
						_				
	Total P	12,788,624	########	4,777,558	#######	319,277	444,300	##########	4,483,810	140,468,909

72.81% 72.81% 72.81% 72.81%

				Measurem					
				ent and	Product	Product	Rebate and		
	Administrati		Installation	Verificatio	Developme	Fulfillmen	Incentive		Total Utility
	ve Costs	Advertising	Costs	n	nt Costs	t Costs	Costs	Other	Costs
Income-Qu	763,630	38,387	1	39,640	-	-	3,011,039	156,148	4,008,844
Low Incom	646,035	32,766	-	20,102	-	-	1,887,116	104,815	2,690,835
Low Incom	3,532	-	1	-	-	-	81,463	3,445	88,440
Low Incom	114,063	5,621	1	19,538	-	-	1,042,460	47,888	1,229,569

2018 System Program Costs (North Carolina View) Duke Energy Carolina, LLC Total Program Cost Source: E-7, Sub 1230, Evans Exhibit 3

				Vintage 20	018 Program Cost b	y Category				1
										i
	Administrative			Measurement	Product	Product	Rebate and			NC
	Costs	Advertising	Installation Costs	and Verification	Development	<b>Fulfillment Costs</b>	Incentive Costs	Other	<b>Total Utility Costs</b>	Allocation
Appliance Recycling Program	-	ı	-	-	-	-	-	-	-	72.71%
Energy Efficiency Education Program for Schools	1,302,970	26,906	-	78,871	25,779	-	480,232	77,502	1,992,260	72.71%
Energy Efficient Appliances and Devices	3,310,906	1,081,539	-	82,354	16,771	-	36,512,751	1,682,923	42,687,244	72.71%
HVAC Energy Efficiency	241,549	1,127,704	-	8,453	=	-	5,303,166	274,274	6,955,146	72.71%
Low Income Energy Efficiency and Weatherization Assistance Program	1,270,339	48,276	-	81,668	-	-	4,835,515	254,936	6,490,735	72.71%
Multi-Family Energy Efficiency	2,203,225	-	-	105,830	-	-	1,155,116	140,750	3,604,921	72.71%
My Home Energy Report	118,751	11,781,280	-	81,069	262,500	19,201	-	502,485	12,765,286	72.71%
PowerManager	372,974	416,328	4,791,425	35,352	-	1,143,684	7,213,282	450,564	14,423,610	32.16%
Residential Energy Assessments	1,996,686	397,134	-	52,881	-	-	278,369	111,159	2,836,229	72.71%
Total Residential	10,817,402	14,879,166	4,791,425	526,477	305,049	1,162,885	55,778,431	3,494,594	91,755,430	ì
Business Energy Report	-	-	-	_	_	-	-	-	-	ì
Non Residential Smart Saver Custom Technical Assessments	383,236	2,781	-	-	-	-	7,794	13,482	407,293	72.71%
Non Residential Smart Saver Custom	1,997,478	117,437	-	259,471	-	-	3,495,543	198,974	6,068,902	72.71%
EnergyWise for Business	99,439	395,160	2,040,713	90,854	(259,626)	-	595,564	100,712	3,062,816	41.47%
Non Residential Smart Saver Energy Efficient Food Service Products	41,488	13,827	-	286	-	-	172,207	7,797	235,605	72.71%
Non Residential Smart Saver Energy Efficient HVAC Products	138,979	9,375	-	215	-	-	1,418,533	53,647	1,620,748	72.71%
Non Residential Smart Saver Energy Efficient Lighting Products	2,677,123	195,886	-	6,303	-	-	22,136,715	856,353	25,872,380	72.71%
Non Residential Smart Saver Energy Efficient Pumps and Drives Products	38,126	8,391	-	215	-	-	221,861	9,193	277,785	72.71%
Non Residential Energy Efficient ITEE	29,897	2,159	-	72	-	-	3,528	1,220	36,875	72.71%
Non Residential Smart Saver Energy Efficient Process Equipment Products	12,028	1,388	-	72	-	-	51,787	2,234	67,509	72.71%
Non Residential Smart Saver Performance Incentive	173,688	10,366	-	-	-	-	279,680	15,876	479,610	72.71%
Small Business Energy Saver	884,599	87,848	-	37,818	-	-	14,439,122	528,607	15,977,993	72.71%
Smart Energy in Offices	165,265	500	-	47,055	-	-	-	6,927	219,748	72.71%
PowerShare	267,881	(140)	-	38,000	-	-	12,213,583	403,653	12,922,977	41.47%
Total Non-Residential	6,909,227	844,978	2,040,713	480,360	(259,626)	-	55,035,916	2,198,674	67,250,242	ì
Total Program Costs	17,726,628	15,724,143	6,832,138	1.006.837	45.423	1,162,885	110,814,347	5.693.269	159,005,671	ì

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	Administrative Costs	Advertising	Installation Costs	Measurement and Verification	Product Development	Product Fulfillment Costs	Rebate and Incentive Costs	Other	Total Utility Costs
Low Income Energy Efficiency and Weatherization Assistance Program	1,270,339	48,276	-	81,668	-	-	4,835,515	254,936	6,490,735
Low Income Neighborhood	695,741	35,528		36,095			2,461,887	139,623	3,368,873
Low Income Weatherization Refrigerator Replacement	54,158			-			218,076	10,869	283,103
Low Income Weatherization	520,443	12,749		45,574			2,155,552	104,444	2,838,761

	1		Vintago	2019 Drogra	m Cost by Cat	ngory - NC Al	location		
		ı — —	Vilitage	ZUIO PIUGIA	I Cost by Cat	egory - INC AI	location	ı — —	1
				Measurem	Product	Product	Rebate and		
	Administrati		Installation	ent and	Developmen		Incentive		Total Utility
	ve Costs	Advertising	Costs	Verification	+	Costs	Costs	Other	Costs
Appliance Recycling Program	ve costs	Auvertising	COSES	verilication		CUSIS	COSES	Other	Costs
	947.430	19,564		57,349	18.744	-	349.191	56,354	1.448.633
Energy Efficiency Education Program for Schools	. ,	-,	-		-,	-	, -		, .,
Energy Efficient Appliances and Devices	2,407,461	786,420	-	59,882	12,194	-	26,549,535	1,223,704	31,039,197
HVAC Energy Efficiency	175,638	819,988	-	6,147	-	-	3,856,094	199,433	5,057,299
Low Income Energy Efficiency and Weatherization Assistance Program	923,703	35,103	-	59,383	-	-	3,516,051	185,372	4,719,611
Multi-Family Energy Efficiency	1,602,032	-	-	76,952	-	-	839,920	102,344	2,621,248
My Home Energy Report	86,347.52	8,566,527.80	-	58,947.58	190,871.76	13,961.74	-	365,372.41	9,282,028.81
PowerManager	238,060	260,909	2,197,043	52,804	(83,489)	367,780	6,438,707	307,081	9,778,895
Residential Energy Assessments	1,451,852	288,768	-	38,451	-	-	202,410	80,827	2,062,308
Total Residential	7,832,522	10,777,280	2,197,043	409,917	138,322	381,742	41,751,908	2,520,488	66,009,221
Business Energy Report	-	-	-	-	-	-	-	-	-
Non Residential Smart Saver Custom Technical Assessments	278,663	2,022	-	-	-	-	5,667	9,803	296,155
Non Residential Smart Saver Custom	1,452,427	85,392	-	188,669	-	-	2,541,716	144,680	4,412,884
EnergyWise for Business	83,112	336,596	2,833,375	48,016	(107,670)	-	386,076	79,078	2,416,251
Non Residential Smart Saver Energy Efficient Food Service Products	30,167	10,054	-	208	-	-	125,217	5,669.16	171,315
Non Residential Smart Saver Energy Efficient HVAC Products	101,056	6,817	-	156	-	-	1,031,459	39,008	1,178,495
Non Residential Smart Saver Energy Efficient Lighting Products	1,946,618	142,435	-	4,583	-	-	16,096,281	622,680	18,812,597
Non Residential Smart Saver Energy Efficient Pumps and Drives Products	27,722	6,101	-	156	-	-	161,322	6,685	201,986
Non Residential Energy Efficient ITEE	21,739	1,570	-	52	-	-	2,565	887	26,813
Non Residential Smart Saver Energy Efficient Process Equipment Products	8,746	1,009	-	52	-	-	37,656	1,624	49,088
Non Residential Smart Saver Performance Incentive	126,294	7,537	-	-	-	-	203,364	11,544	348,739
Small Business Energy Saver	643,219	63,877	-	27,499	-	-	10,499,126	384,366	11,618,086
Smart Energy in Offices	120,169	364	-	34,215	-	-	-	5,037	159,785
PowerShare	223,898	(119)	-	20,083	-	-	7,917,482	316,944	10,194,918
Total Non-Residential	5,063,829	663,654	2,833,375	323,689	(107,670)	-	39,007,930	1,628,005	49,887,114
	İ				i		i	i	
Total Program Costs	12,896,351	11,440,934	5,030,418	733,606	30,651	381,742	80,759,839	4,148,494	115,896,335

	Administrati ve Costs	Advertising	Installation Costs	Measurem ent and Verification	Product Developmen	Product Fulfillment Costs	Rebate and Incentive Costs	Other	Total Utility Costs
Low Income Energy Efficiency and Weatherization Assistance Program	923.703	35.103				Costs	3.516.051	185.372	4,719,611
	,			59,383	-	-	-,,		
Low Income Neighborhood	505,894	25,833	-	26,245	-	-	1,790,113		2,449,610
Low Income Weatherization Refrigerator Replacement	39,380	-	-	-	-	-	158,570	7,903	205,853
Low Income Weatherization	378,430	9,270	-	33,138	-	-	1,567,368	75,944	2,064,150

72.71% 72.71% 72.71% 72.71%

2019 System Program Costs (North Carolina View) Duke Energy Carolina, LLC Total Program Cost Source: E-7, Sub 1230, Evans Exhibit 3

				Vintage 20	019 Program Cost b	y Category				
	Administrative			Measurement	Product	Product	Rebate and			NC
	Costs	Advertising	Installation Costs	and Verification	Development	<b>Fulfillment Costs</b>	Incentive Costs	Other	<b>Total Utility Costs</b>	Allocation
Appliance Recycling Program	-	-	-	-	-	-	-	-	-	73.09%
Energy Efficiency Education Program for Schools	1,084,097	28,519	-	4,056	2,692	-	495,935	68,784	1,684,083	73.09%
nergy Efficient Appliances and Devices	2,832,797	2,205,869	-	6,852	3,501	-	34,642,993	1,688,975	41,380,987	73.09%
IVAC Energy Efficiency	276,102	1,510,873	-	-	-	-	5,311,650	302,045	7,400,669	73.09%
ow Income Energy Efficiency and Weatherization Assistance Program	1,314,043	49,863	-	87,440	-	-	5,590,035	300,753	7,342,133	73.09%
Multi-Family Energy Efficiency	2,503,166	-	-	17,700	-	-	1,008,869	150,421	3,680,155	73.09%
My Home Energy Report	530,263	9,059,954	481,469	21,210	343	30,864	-	431,055	10,555,159	73.09%
PowerManager	209,175	123,301	3,822,472	20,082	-	1,075,725	7,654,406	478,477	13,383,639	34.12%
Residential Energy Assessments	2,270,416	587,183	-	6,367	-	-	192,776	130,147	3,186,888	73.09%
otal Residential	11,020,059	13,565,561	4,303,941	163,707	6,537	1,106,589	54,896,664	3,550,656	88,613,714	
Business Energy Report	-	-	-	-	-	-	-	-	-	
Non Residential Smart Saver Custom Technical Assessments	106,322	5,704	-	-	4,776	-	165,648	13,475	295,925	73.09%
Non Residential Smart Saver Custom	2,353,768	76,578	-	17,760	23,396	-	5,987,025	412,913	8,871,440	73.09%
EnergyWise for Business	75,224	363,163	2,189,964	5,852	-	-	884,345	167,902	3,686,451	40.12%
Non Residential Smart Saver Energy Efficient Food Service Products	59,262	8,208	-	5,750	-	-	251,163	15,521	339,904	73.09%
Non Residential Smart Saver Energy Efficient HVAC Products	140,512	4,810	-	8,625	2,736	-	1,950,484	100,593	2,207,760	73.09%
Non Residential Smart Saver Energy Efficient Lighting Products	2,871,441	168,798	-	256,230	38,878	-	16,543,407	950,365	20,829,118	73.09%
Non Residential Smart Saver Energy Efficient Pumps and Drives Products	58,322	7,793	-	11,500	-	-	102,810	8,698	189,123	73.09%
Non Residential Energy Efficient ITEE	19,123	694	-	2,875	-	-	19,591	2,040	44,323	73.09%
Non Residential Smart Saver Energy Efficient Process Equipment Products	10,829	963	-	2,875	-	-	99,668	5,477	119,811	73.09%
Non Residential Smart Saver Performance Incentive	322,119	21,633	-	-	2,458	-	402,997	35,742	784,949	73.09%
Small Business Energy Saver	713,870	137,623	-	6,603	-	-	10,040,202	519,966	11,418,264	73.09%
mart Energy in Offices	-	-	-	-	-	-	-	-	-	73.09%
PowerShare	235,001	-	-	30,320	-	-	12,288,629	465,656	13,019,606	40.12%
Total Non-Residential	6,965,794	795,968	2,189,964	348,389	72,245	-	48,735,967	2,698,346	61,806,674	
Total Program Costs	17,985,853	14,361,529	6,493,906	512,097	78,782	1,106,589	103,632,631	6,249,002	150,420,388	

	Administrative			Measurement	Product	Product	Rebate and		
	Costs	Advertising	Installation Costs	and Verification	Development	<b>Fulfillment Costs</b>	Incentive Costs	Other	<b>Total Utility Costs</b>
Low Income Energy Efficiency and Weatherization Assistance Program	1,314,043	49,863	-	87,440	-	-	5,590,035	300,753	7,342,133
Low Income Neighborhood	635,190	33,898		86,520			2,356,855	145,380	3,257,842
Low Income Weatherization Refrigerator Replacement	50,121			-			244,401	11,471	305,993
Low Income Weatherization	628,732	15,965		920			2,988,779	143,902	3,778,297

			Vintage	2019 Progra	m Cost by Cate	gory - NC Al	location		
	Administrati ve Costs	Advertising	Installation Costs	Measurem ent and Verification	Product Developmen t	Product Fulfillment Costs	Rebate and Incentive Costs	Other	Total Utility Costs
Appliance Recycling Program	-	-	-	-	-	-	-	-	-
Energy Efficiency Education Program for Schools	792,371	20,844		2,965	1,968	-	362,481	50,274	1,230,903
Energy Efficient Appliances and Devices	2,070,502	1,612,278		5,008	2,559	-	25,320,700	1,234,478	30,245,525
HVAC Energy Efficiency	201,804	1,104,303		-	-	-	3,882,306	220,766	5,409,178
Low Income Energy Efficiency and Weatherization Assistance Program	960,439	36,445		63,910	-	-	4,085,778	219,821	5,366,394
Multi-Family Energy Efficiency	1,829,574	-		12,937	-	-	737,386	109,943	2,689,840
My Home Energy Report	387,571.55	6,621,955.80	351,908	15,502.27	251.05	22,558.71	-	315,060.12	7,714,807.17
PowerManager	177,210	165,972	2,051,329	19,193	-	367,017	7,105,907	379,405	10,266,034
Residential Energy Assessments	1,659,456	429,174		4,654	-	-	140,900	95,125	2,329,309
Total Residential	8,078,927	9,990,973	2,403,237	124,169	4,778	389,576	41,635,458	2,624,873	65,251,990
Business Energy Report	-	=	-	-	-	-	-	-	-
Non Residential Smart Saver Custom Technical Assessments	77,711	4,169	-	-	3,491	-	121,073	9,849	216,292
Non Residential Smart Saver Custom	1,720,378	55,971	-	12,981	17,101	-	4,375,940	301,800	6,484,170
EnergyWise for Business	50,533.59	195,185	2,412,389	3,652	#DIV/0!	-	561,008	118,246	2,664,092
Non Residential Smart Saver Energy Efficient Food Service Products	43,315	6,000	-	4,203	-	-	183,576	11,344.05	248,437
Non Residential Smart Saver Energy Efficient HVAC Products	102,700	3,516	-	6,304	2,000	-	1,425,616	73,524	1,613,660
Non Residential Smart Saver Energy Efficient Lighting Products	2,098,748	123,375	-	187,279	28,416	-	12,091,641	694,625	15,224,084
Non Residential Smart Saver Energy Efficient Pumps and Drives Products	42,628	5,696	-	8,405	-	-	75,144	6,358	138,231
Non Residential Energy Efficient ITEE	13,977	507	-	2,101	-	-	14,319	1,491	32,396
Non Residential Smart Saver Energy Efficient Process Equipment Products	7,915	704	-	2,101	-	-	72,847	4,003	87,570
Non Residential Smart Saver Performance Incentive	235,438	15,812	-	-	1,797	-	294,552	26,124	573,723
Small Business Energy Saver	521,770	100,589	-	4,826	-	-	7,338,423	380,045	8,345,654
Smart Energy in Offices	-	-	-	-	-	-	-	-	-
PowerShare	157,867	-	-	18,920	#DIV/0!	-	7,795,628	327,940	9,408,894
Total Non-Residential	5,072,982	511,524	2,412,389	250,772	#DIV/0!	-	34,349,768	1,955,347	45,037,204
·									
Total Program Costs	13,151,909	10,502,497	4,815,626	374,941	#DIV/0!	389,576	75,985,227	4,580,220	110,289,194

73.09% 73.09% 73.09% 73.09%

				Measurem	Product	Product	Rebate and		
	Administrati		Installation		Developmen		Incentive		Total Utility
	ve Costs	Advertising	Costs	Verification	ť	Costs	Costs	Other	Costs
Low Income Energy Efficiency and Weatherization Assistance Program	960,439	36,445	-	63,910	-	-	4,085,778	219,821	5,366,394
Low Income Neighborhood	464,263	24,776	-	63,238	-	-	1,722,634	106,259	2,381,170
Low Income Weatherization Refrigerator Replacement	36,634	-	-	-	-	-	178,634	8,385	223,652
Low Income Weatherization	459,542	11,669	-	672	-	-	2,184,510	105,178	2,761,572

2020 Forecasted System Program Costs (North Carolina View)
Duke Energy Carolina, LLC

Duke Energy Carolina, LLC
Total Program Cost Source: E-7, Sub 1164, Evans Exhibit 1

			Vintage 20	20 Program Cost b	y Category			
	Administrative Costs	Advertising	Installation Costs	Measurement and Verification	Rebate and Incentive Costs	Other	Total Utility Costs	NC Allocation
Appliance Recycling Program	-	-	-	-	-	-	-	72.71%
Energy Efficiency Education Program for Schools	1,664,687	6,189	-	85,800	716,587	148,365	2,621,628	72.71%
Energy Efficient Appliances and Devices	1,418,553	958,765	-	308,660	5,912,982	515,188	9,114,148	72.71%
HVAC Energy Efficiency	983,575	325,244	-	-	5,906,400	448,379	7,663,598	72.71%
Income Qualified Energy Efficiency and Weatherization Assistance	1,450,248	67,614	-	-	6,663,028	508,389	8,689,280	72.71%
Multi-Family Energy Efficiency	2,425,656	5,293	-	134,376	844,267	203,533	3,613,126	72.71%
My Home Energy Report	1,303,244	9,660,816	-	-	-	681,345	11,645,405	72.71%
PowerManager	1,393,533	1,250,239	5,887,970	375,000	9,505,310	979,575	19,391,626	32.16%
Residential Energy Assessments	1,982,520	480,911	-	28,200	227,052	76,575	2,795,258	72.71%
Total Residential	12,622,018	12,755,070	5,887,970	932,036	29,775,626	3,561,350	65,534,070	
Business Energy Report			_	_				
Non Residential Smart Saver Custom Technical Assessments	491,149	52,505	-	115,350	681,600	74,073	1,414,676	72.71%
Non Residential Smart Saver Custom  Non Residential Smart Saver Custom	2,768,025	255,468	-	231,000	6,901,731	600,030		72.71%
EnergyWise for Business	106,704	256,916	2,282,826	120,000	2,047,932	283,799		41.47%
Non Residential Smart Saver Energy Efficient Food Service Products	205,217	230,910	2,202,020	298	1,125,293	81,843		72.71%
Non Residential Smart Saver Energy Efficient HVAC Products	168,540	23,273	-	447	1,089,065	77,435		72.71%
Non Residential Smart Saver Energy Efficient Lighting Products	4,884,312	582,820	-	13,261	14,838,434	1,227,575		72.71%
Non Residential Smart Saver Energy Efficient Pumps and Drives Products	211,096	17,492	-	596	386,755	37,201	653,139	72.71%
Non Residential Energy Efficient ITEE	37,463	4,482	-	149	25,677	4.088	71,858	72.71%
Non Residential Energy Efficient Process Equipment Products	33,274	2,546	_	149	126.372	9.805	172.146	72.71%
Non Residential Smart Saver Performance Incentive	698,946	67,701	_	21,000	2,807,280	216,062	3,810,989	72.71%
Small Business Energy Saver	679,276	140,000	_	69.924	9,146,901	602,506		72.71%
Smart Energy in Offices	-	-	-	-	-	-	-	72.71%
PowerShare	231,662	30,000	53,040	70,000	12,502,638	696,097	13,583,438	41.47%
Total Non-Residential	10,515,663	1,456,466	2,335,866	642,174	51,679,678	3,910,515	70,540,362	
Total Program Costs	23.137.682	14,211,536	8.223.835	1,574,210	81.455.304	7,471,865	136.074.432	

	Administrative			Measurement	Rebate and				
	Costs	Advertising	Installation Costs	and Verification	Incentive Costs	Other	<b>Total Utility Costs</b>		
Income Qualified Energy Efficiency and Weatherization Assistance	1,450,248	67,614	-	-	6,663,028	508,389	8,689,280		72.719
Low Income Neighborhood	997,245	60,064	-	-	2,623,653	228,748	3,909,710	HWI	72.719
Low Income Weatherization Refrigerator Replacement	19,871	-	-	-	180,375	12,444	212,690	REFI	72.719
Low Income Weatherization	433,133	7,550	-	-	3,859,000	267,197	4,566,880	WZE	72.719

		Vint	age 2020 Progra	am Cost by Cat	egory - NC Alloc	ation	
	Administrati ve Costs	Advertising	Installation Costs	Measureme nt and Verification	Rebate and Incentive Costs	Other	Total Utility Costs
Appliance Recycling Program	-	-	1	-	-	-	-
Energy Efficiency Education Program for Schools	1,210,445	4,500	ı	62,388	521,052	107,881	1,906,266
Energy Efficient Appliances and Devices	1,031,473	697,147	-	224,436	4,299,510	374,609	6,627,175
HVAC Energy Efficiency	715,188	236,495	-	-	4,294,724	326,030	5,572,436
Low Income Energy Efficiency and Weatherization Assistance Program	1,054,520	49,164	-	-	4,844,891	369,665	6,318,240
Multi-Family Energy Efficiency	1,763,769	3,849	-	97,709	613,892	147,995	2,627,214
My Home Energy Report	947,629	7,024,674	-	-	-	495,427	8,467,729
PowerManager	556,935	494,310	2,644,578	181,690	7,735,763	630,117	12,243,392
Residential Energy Assessments	1,441,551	349,685	-	20,505	165,097	55,680	2,032,518
Total Residential	8,721,509	8,859,824	2,644,578	586,728	22,474,928	2,507,404	45,794,970
Business Energy Report	-	·	ı	-		-	-
Non Residential Smart Saver Custom Technical Assessments	357,129	38,178	1	83,875	495,612	53,861	1,028,654
Non Residential Smart Saver Custom	2,012,715	185,759	ı	167,967	5,018,459	436,300	7,821,200
EnergyWise for Business	226,499	570,823	3,333,088	147,987	1,404,120	235,352	4,308,914
Non Residential Smart Saver Energy Efficient Food Service Products	149,219	16,924	1	217	818,235	59,510.69	1,044,106
Non Residential Smart Saver Energy Efficient HVAC Products	122,550	16,916	-	325	791,893	56,305	987,989
Non Residential Smart Saver Energy Efficient Lighting Products	3,551,532	423,786	-	9,642	10,789,478	892,607	15,667,045
Non Residential Smart Saver Energy Efficient Pumps and Drives Products	153,494	12,719	-	433	281,221	27,050	474,917
Non Residential Energy Efficient ITEE	27,240	3,259	-	108	18,671	2,973	52,250
Non Residential Smart Saver Energy Efficient Process Equipment Products	24,194	1,851	-	108	91,889	7,130	125,173
Non Residential Smart Saver Performance Incentive	508,225	49,227	-	15,270	2,041,259	157,105	2,771,086
Small Business Energy Saver	493,922	101,798	-	50,844	6,650,991	438,101	7,735,656
Smart Energy in Offices	-	-	-	-	-	-	
PowerShare	491,743	66,655	77,442	86,326	8,572,162	577,266	11,480,548
Total Non-Residential	8,118,464	1,487,893	3,410,530	563,102	36,973,989	2,943,560	53,497,539
Total Program Costs	16,839,973	10,347,717	6,055,107	1,149,830	59,448,917	5,450,964	99,292,509
Total Flogram Costs	10,033,373	10,347,717	0,055,107	1,143,030	JJ,440,J1/	3,430,304	33,434,309

				Measureme	Rebate and		
	Administrati		Installation	nt and	Incentive		<b>Total Utility</b>
	ve Costs	Advertising	Costs	Verification	Costs	Other	Costs
Low Income Energy Efficiency and Weatherization Assistance Program	1,054,520	49,164	-	-	4,844,891	369,665	6,318,240
Low Income Neighborhood	725,127	43,674	-	-	1,907,738	166,330	2,842,869
Low Income Weatherization Refrigerator Replacement	14,449	-	-	-	131,156	9,048	154,653
Low Income Weatherization	314,944	5,490	-	-	2,805,997	194,287	3,320,718

2021 Forecasted System Program Costs (North Carolina View)
Duke Energy Carolina, LLC
Total Program Cost Source: E-7, Sub 1230, Evans Exhibit 1

			Vintage 20	21 Program Cost b	y Category			
	Administrative Costs	Advertising	Installation Costs	Measurement and Verification	Rebate and Incentive Costs	Other	Total Utility Costs	NC Allocation
Appliance Recycling Program	-	-	-	-	-	-	-	73.09%
Energy Efficiency Education Program for Schools	1,495,224	12,626	-	22,200	628,362	156,643	2,315,055	73.09%
Energy Efficient Appliances and Devices	1,100,027	852,285	-	114,606	8,231,934	316,882	10,615,734	73.09%
HVAC Energy Efficiency	429,347	1,726,465	-	167,191	2,818,400	794,650	5,936,054	73.09%
Low Income Energy Efficiency and Weatherization Assistance Program	1,106,857	239,683	-	-	6,178,677	551,806	8,077,022	73.09%
Multi-Family Energy Efficiency	3,285,556	292	-	-	1,235,752	331,558	4,853,158	73.09%
My Home Energy Report	581,611	11,227,442	35,191	219,800	-	868,510	12,932,554	73.09%
PowerManager	1,202,913	831,878	6,155,858	275,000	10,700,422	1,261,832	20,427,903	34.12%
Residential Energy Assessments	984,758	270,870	3,947,295	-	485,352	417,107	6,105,383	73.09%
Total Residential	10,186,293	15,161,542	10,138,344	798,797	30,278,899	4,698,988	71,262,862	
Business Energy Report	-	-	-	-	-	-	-	
Non Residential Smart Saver Custom Technical Assessments	493,432	43,248	-	-	494,160	75,806	1,106,646	73.09%
Non Residential Smart Saver Custom	3,238,872	223,181	-	99,000	5,940,475	691,444	10,192,972	73.09%
EnergyWise for Business	81,854	256,916	2,307,512	120,000	2,813,992	401,538	5,981,812	40.12%
Non Residential Smart Saver Energy Efficient Food Service Products	179,239	20,559	-	4,343	781,365	72,153	1,057,658	73.09%
Non Residential Smart Saver Energy Efficient HVAC Products	185,090	29,571	-	6,514	1,393,367	118,251	1,732,792	73.09%
Non Residential Smart Saver Energy Efficient Lighting Products	4,879,327	655,114	-	193,255	16,903,125	1,650,016	24,280,837	73.09%
Non Residential Smart Saver Energy Efficient Pumps and Drives Products	119,872	16,839	-	8,686	251,070	28,517	424,983	73.09%
Non Residential Energy Efficient ITEE	15,793	4,705	-	2,171	21,616	3,097	47,381	73.09%
Non Residential Smart Saver Energy Efficient Process Equipment Products	26,840	2,936	-	2,171	77,544	7,892	117,383	73.09%
Non Residential Smart Saver Performance Incentive	671,181	63,632	-	9,000	1,460,345	161,428	2,365,586	73.09%
Small Business Energy Saver	734,550	125,000	-	76,920	9,340,151	750,066	11,026,688	73.09%
Smart Energy in Offices	-	-	-	-	-	-	-	73.09%
PowerShare	174,223	30,000	53,045	60,000	12,569,384	856,758	13,743,409	40.12%
Total Non-Residential	10,800,271	1,471,700	2,360,557	582,060	52,046,594	4,816,965	72,078,147	
Total Program Costs	20,986,564	16,633,241	12,498,901	1,380,857	82,325,493	9,515,953	143,341,010	

	Administrative			Measurement	Rebate and				
	Costs	Advertising	<b>Installation Costs</b>	and Verification	Incentive Costs	Other	<b>Total Utility Costs</b>		
Low Income Energy Efficiency and Weatherization Assistance Program	1,106,857	239,683	-	-	6,178,677	551,806	8,077,022		73.09%
Low Income Neighborhood	805,975	233,083	-	-	3,855,677	358,919	5,253,653	HWI	73.09%
Low Income Weatherization Refrigerator Replacement	27,100	-	-	-	271,000	21,859	319,959	REFI	73.09%
Low Income Weatherization	273,782	6,600	-	-	2,052,000	171,028	2,503,410	WZE	73.09%

	1	Vint	age 2021 Progra	ım Cost by Cat	egory - NC Allo	cation	
			age Lull 1 Togic	Measureme	Rebate and		
	Administrati		Installation	nt and	Incentive		Total Utility
	ve Costs	Advertising	Costs	Verification	Costs	Other	Costs
Appliance Recycling Program	-	-	-	-	-	-	-
Energy Efficiency Education Program for Schools	1,092,865	9,229	-	16,226	459,272	114,491	1,692,082
Energy Efficient Appliances and Devices	804,014	622,939	-	83,766	6,016,753	231,611	7,759,082
HVAC Energy Efficiency	313,811	1,261,880	-	122,201	2,059,980	580,813	4,338,685
Low Income Energy Efficiency and Weatherization Assistance Program	809,006	175,185	-	-	4,516,019	403,317	5,903,527
Multi-Family Energy Efficiency	2,401,426	213	-	-	903,216	242,337	3,547,192
My Home Energy Report	425,102	8,206,181	25,721	160,653	-	634,797	9,452,454
PowerManager	497,780	381,711	2,905,639	155,237	8,899,297	859,820	13,699,485
Residential Energy Assessments	719,763	197,980	2,885,093	-	354,746	304,865	4,462,448
Total Residential	7,063,767	10,855,318	5,816,454	538,083	23,209,283	3,372,051	50,854,956
Business Energy Report	-	-	-	-	-	-	-
Non Residential Smart Saver Custom Technical Assessments	360,652	31,610	-	-	361,183	55,407	808,852
Non Residential Smart Saver Custom	2,367,304	163,124	-	72,359	4,341,916	505,379	7,450,083
EnergyWise for Business	187,119.84	401,960.32	3,340,282.13	121,707.41	1,914,427.61	322,673.51	4,885,703.19
Non Residential Smart Saver Energy Efficient Food Service Products	131,006	15,026	-	3,174	571,103	52,736.76	773,047
Non Residential Smart Saver Energy Efficient HVAC Products	135,283	21,613	-	4,761	1,018,417	86,430	1,266,505
Non Residential Smart Saver Energy Efficient Lighting Products	3,566,319	478,826	-	141,251	12,354,561	1,206,003	17,746,959
Non Residential Smart Saver Energy Efficient Pumps and Drives Products	87,615	12,308	-	6,349	183,508	20,843	310,622
Non Residential Energy Efficient ITEE	11,543	3,439	-	1,587	15,799	2,264	34,631
Non Residential Smart Saver Energy Efficient Process Equipment Products	19,618	2,146	-	1,587	56,677	5,768	85,796
Non Residential Smart Saver Performance Incentive	490,569	46,509	-	6,578	1,067,372	117,988	1,729,016
Small Business Energy Saver	536,885	91,363	-	56,221	6,826,753	548,226	8,059,449
Smart Energy in Offices	-	-	-	-	-	-	-
PowerShare	398,275.51	46,936.86	76,786.35	60,853.71	8,551,258.55	688,485.49	11,225,064.10
Total Non-Residential	8,292,188	1,314,861	3,417,068	476,428	37,262,976	3,612,204	54,375,726
Total Program Costs	15,355,956	12,170,179	9,233,522	1,014,511	60,472,259	6,984,255	105,230,682

				Measureme	Rebate and		
	Administrati		Installation	nt and	Incentive		Total Utility
	ve Costs	Advertising	Costs	Verification	Costs	Other	Costs
Low Income Energy Efficiency and Weatherization Assistance Program	809,006	175,185	-	-	4,516,019	403,317	5,903,527
Low Income Neighborhood	589,090	170,361	-	-	2,818,129	262,335	3,839,916
Low Income Weatherization Refrigerator Replacement	19,807	-		-	198,075	15,977	233,859
Low Income Weatherization	200,108	4,824	1	-	1,499,815	125,005	1,829,752

2015 Income	<b>Qualified Energy</b>	Ffficiency and	Weatherization	Assistance
ZOTO INCOME	Qualified chergy	/ ciliciency and	vveatnenzation	Assistance

Name	Plant, Net FR	Plant, Net FR	Allocation
Low Income Neighborhood	2,291,394	538	72.96%
Low Income Weatherization- Refrigerator Replacement	51,997	6	72.96%
Low Income Weatherization- Tier 1	22,548	4	72.96%
Low Income Weatherization- Tier 2	759,245	60	72.96%
Totals	3,125,184	608	

#### 2016 Income Qualified Energy Efficiency and Weatherization Assistance

` ',			
	Annual	Annual	
	kWh at	kW at	NC
	Plant, Net	Plant,	Allocation
Name	FR	Net FR	
Low Income Neighborhood	3,132,505	509	73.10%
Low Income Weatherization- Refrigerator Replacement	168,674	19	73.10%
Low Income Weatherization- Tier 1	22,269	4	73.10%
Low Income Weatherization- Tier 2	1,478,029	118	73.10%
Totals	4,801,478	649	

#### 2017 Income Qualified Energy Efficiency and Weatherization Assistance

	Annual	Annual	
	kWh at	kW at	NC
	Plant, Net	Plant,	Allocation
Name	FR	Net FR	
Low Income Neighborhood	4,082,385	663	72.81%
Low Income Weatherization- Refrigerator Replacement	191,502	22	72.81%
Low Income Weatherization- Tier 1	13,362	2	72.81%
Low Income Weatherization- Tier 2	1,054,375	84	72.81%
Totals	5,341,624	771	

#### 2018 Income Qualified Energy Efficiency and Weatherization Assistance

one Quantica Energy Entererity and treatmentations	30101411100		
	Annual	Annual	
	kWh at	kW at	NC
	Plant, Net	Plant,	Allocation
Name	FR	Net FR	
Low Income Neighborhood	5,394,663	768	0.7271305
Low Income Weatherization- Refrigerator Replacement	239,695	27	0.7271305
Low Income Weatherization- Tier 1	20,321	3	0.7271305
Low Income Weatherization- Tier 2	1,318,564	105	0.7271305
Totals	6,973,243	904	

#### 2015 Income Qualified Energy Efficiency and Weatherization Assistance - NC Allocation

	Annual kWh at Plant, Net FR	Annual kW at Plant,
Name	, , , , , , , , , , , , , , , , , , ,	Net FR
Low Income Neighborhood	1,671,720	392
Low Income Weatherization- Refrigerator Replaceme	ent 37,935	4
Low Income Weatherization- Tier 1	16,450	3
Low Income Weatherization- Tier 2	553,919	44
Totals	2,280,024	444

#### 2016 Income Qualified Energy Efficiency and Weatherization Assistance - NC Allocation

Name	Annual kWh at Plant, Net FR	Annual kW at Plant, Net FR
Low Income Neighborhood	2,289,745	372
Low Income Weatherization- Refrigerator Replacem	nent 123,294	14
Low Income Weatherization- Tier 1	16,278	3
Low Income Weatherization- Tier 2	1,080,385	86
Totals	3,509,702	474

#### 2017 Income Qualified Energy Efficiency and Weatherization Assistance - NC Allocation

Name	Annual kWh at Plant, Net FR	Annual kW at Plant, Net FR
Low Income Neighborhood	2,972,334	483
Low Income Weatherization- Refrigerator Replacem	nent 139,430.19	15.88
Low Income Weatherization- Tier 1	9,728	2
Low Income Weatherization- Tier 2	767,677	61
Totals	3,889,170	561

#### 2018 Income Qualified Energy Efficiency and Weatherization Assistance - NC Allocation

Name	Annual kWh at Plant, Net FR	Annual kW at Plant, Net FR
Low Income Neighborhood	3,922,624.26	559
Low Income Weatherization- Refrigerator Replacem	nent 174,289.20	19.85
Low Income Weatherization- Tier 1	14,775.89	2
Low Income Weatherization- Tier 2	958,768.18	76
Totals	5,070,458	657

	Annual	Annual	
	kWh at	kW at	NC
	Plant, Net	Plant,	Allocation
Name	FR	Net FR	
Low Income Neighborhood	7,014,628	931	0.7309039
Low Income Weatherization- Refrigerator Replacement	370,322	42	0.7309039
Low Income Weatherization- Tier 1	19,207	3	0.7309039
Low Income Weatherization- Tier 2	1,625,594	129	0.7309039
Totals	9,029,752	1,105	

2020 Income Qualified Energy Efficiency and Weatherization Assistance

	Annual	Annual	
	kWh at	kW at	NC
	Plant, Net	Plant,	Allocation
Name	FR	Net FR	
Low Income Weatherization- Refrigerator Replacement	209,257	24	0.7271305
Low Income Weatherization- Tier 1	25,053	4	0.7271305
Low Income Weatherization- Tier 2	323,024	26	0.7271305
Low Income Neighborhood	3,688,658	599	0.7271305
Totals	4,245,993	653	

Name	Annual kWh at Plant, Net FR	Annual kW at Plant, Net FR
Low Income Neighborhood	5,127,019.23	680
Low Income Weatherization- Refrigerator Replacem	nent 270,669.58	30.83
Low Income Weatherization- Tier 1	14,038.73	2
Low Income Weatherization- Tier 2	1,188,153.29	94
Totals	6,599,881	808

2020 Income Qualified Energy Efficiency and Weatherization Assistance - NC Allocation

Annual WWh	Annual
at Plant, Net	kW at
	Plant,
ΓK	Net FR
152,157.24	17
18,216.85	3.07
234,880.90	18.68
2,682,135.85	435
3,087,391	475
	FR  152,157.24  18,216.85  234,880.90  2,682,135.85

2021 Inco

co	ome Qualified Energy Efficiency and Weatherization Assistance								
			Annual						
			<b>Cumulati</b>						
			ve						
		Annual	Summer	NC					
		Cumulative	Coincide	Allocation					
		kWh	nt kW						
		w/losses	w/losses						
	Name	Net Free	Net Free						
	Low Income Weatherization- Refrigerator Replacement	310,722	35	73.09%					
	Low Income Weatherization- Tier 1	20,878	4	73.09%					
	Low Income Weatherization- Tier 2	1,261,442	100	73.09%					
	Low Income Neighborhood	5,384,822	714	73.09%					
	NES Attic Insulation	401,966	279	73.09%					
	NES Air Sealing	535,489	265	73.09%					
	NES Duct Sealing	805,792	261	73.09%					
	NES Smart Thermostat	446,373	<del>_</del>	73.09%					
	Totals	9,167,483	1,658						

2021 Income Qualified Energy Efficiency and Weatherization Assistance - NC Allocation

CU	one Quained Energy Endency and Weatherization Assistance - Ne Anocation								
					Annual				
					Cumulati				
					ve				
			Annual		Summer				
			Cumulative		Coincide				
			kWh		nt kW				
			w/losses Net		w/losses				
	Name		Free		Net Free				
	Low Income Weatherization- Refrigerator Replacem	ent	227,107.61	· ·	26				
	Low Income Weatherization- Tier 1		15,259.48		3				
	Low Income Weatherization- Tier 2		921,993.03		73				
	Low Income Neighborhood		3,935,787.54		522				
	NES Attic Insulation		293,798.20		204				
	NES Air Sealing		391,390.88		194				
	NES Duct Sealing		588,956.57		190				
	NES Smart Thermostat		326,256.11		-				
	Totals		6,700,549		1,212				

2015 Income Qualified Energy Efficiency and Weatherization Assistance

				Lost	Lost	Lost	Lost	Lost	Lost
Meas #		Lost Rev	enue	Revenue	Revenue	Revenue	Revenue	Revenue	Revenue
ivieds #		Earned in 2015	Earned in	Earned	Earned	Earned in	Earned in	Earned in	
	Name			2016	in 2017	in 2018	2019	2020	2021
<u>-</u>	Low Income Neighborhood			1,485,950	######	586,930			-
	Low Income Weather	ization- Ref 1	1,144	48,953	48,953	28,556			-
	Low Income Weather	ization- Tier	5,722	21,228	21,228	12,383			-
Low Income Weatherization- Tier		ization- Tier 18	5,608	714,794	714,794	416,963			
	Totals	1,04	0,801	2,270,925	#####	######	<del>-</del>	<del></del>	-

2016 Income Qualified Energy Efficiency and Weatherization Assistance

				Lost	Lost	Lost	Lost	Lost	Lost
	∕leas#		Lost Revenue	Revenue	Revenue	Revenue	Revenue	Revenue	Revenue
,	ileas #		Earned in 2015	Earned in	Earned	Earned	Earned in	Earned in	Earned in
		Name		2016	in 2017	in 2018	2019	2020	2021
	Low Income Neighborhood		64,859.37	139,657	80,897	-		-	
	Low Income Weatherization- Refrigerator Replacement Low Income Weatherization- Tier 1 Low Income Weatherization- Tier 2		5,219.48	10,574	6,126	-		-	
			ization- Tier 1	702.45	1,413	820	-		-
			44,718.37	90,473	52,387	-		-	
	Totals -			########	#####	#####	<del></del>	<del></del>	-

2017 Income Qualified Energy Efficiency and Weatherization Assistance

			Lost	Lost	Lost	Lost	Lost	Lost
Meas #		Lost Revenue	Revenue	Revenue	Revenue	Revenue	Revenue	Revenue
ivieds #		Earned in 2015	Earned in	Earned	Earned	Earned in	Earned in	Earned in
	Name		2016	in 2017	in 2018	2019	2020	2021
	Low Income Neighbor	rhood		102,129	149,915	97,191	39,129	-
	Low Income Weatherization- Refrigerator Replacement			5,730	9,136	5,929	2,748	-
	Low Income Weather	Income Weatherization- Tier 1			669	434	163	-
	Low Income Weatherization- Tier 2			33,112	50,891	32,960	13,591_	
				#####	#####	136,514	55,631	<u> </u>

2018 Income Qualified Energy Efficiency and Weatherization Assistance

			Lost	Lost	Lost	Lost	Lost	Lost
Meas #		Lost Revenue	Revenue	Revenue	Revenue	Revenue	Revenue	Revenue
IVIEdS #		Earned in 2015	Earned in	Earned	Earned	Earned in	Earned in	Earned in
	Name		2016	in 2017	in 2018	2019	2020	2021
	Low Income Neighbor	rhood			106,351	251,976	147,598	_
	Low Income Weather	ization- Refrigerator Replacement			6,603	14,871	8,711	
	Low Income Weatherization- Tier 1 Low Income Weatherization- Tier 2				616	1,234	723	
					42,664	78,410	45,930	
	Totals	<u> </u>	<u>-</u>	-	#####	346,490	202,961	

2019 Income (	Qualified Energy	Efficiency and	Weatherization Assistance
LOTO IIICOIIIC	Quannea Energy	Lineichte, ana	TT Catherization / (33)3tance

<u> </u>	<u> </u>	y und Wedthenzation / toolstance	Lost	Lost	Lost	Lost	Lost	Lo
4		Lost Revenue	Revenue	Revenue	Revenue	Revenue	Revenue	Reve
Meas #		Earned in 2015	Earned in	Earned	Earned	Earned in	Earned in	Earn
	Name		2016	in 2017	in 2018	2019	2020	20
	Low Income Neighborhood			•	163,281	228,242	126	
	Low Income Weather	rization- Refrigerator Replacement				10,363	13,861	8
Low Income Weatherization- Tier 1						624	971	
	Low Income Weather	rization- Tier 2				51,565	78,069	4
	Totals	<del>-</del>	<del>-</del>	<del></del>	<del></del>	225,833	321,143	18
					<del></del>		<del></del>	
ne Quali	fied Energy Efficienc	y and Weatherization Assistance						
			Lost	Lost	Lost	Lost	Lost	I
Meas #		Lost Revenue	Revenue	Revenue	Revenue	Revenue	Revenue	Re
IVICAS #		Earned in 2015	Earned in	Earned	Earned	Earned in	Earned in	Ear
	Name		2016	in 2017	in 2018	2019	2020	2
	Low Income Weatherization- Refrigerator Replacement 6,429							
	Low Income Weatherization- Tier 1					753		
Low Income Weatherization- Tier 2							6,892	
Low Income Neighborhood						89,461	3	
	Totals	<u> </u>		<u> </u>	<u> </u>	<del>-</del>	103,534	36
			·	·		<del></del> -	<del></del>	
ne Quali	fied Energy Efficienc	y and Weatherization Assistance						
			Lost	Lost	Lost	Lost	Lost	
Meas #		Lost Revenue	Revenue	Revenue	Revenue	Revenue	Revenue	Re
ivicus ii		Earned in 2015	Earned in	Earned	Earned	Earned in	Earned in	Ear
							2020	
	Name		2016	in 2017	in 2018	2019	2020	
	Low Income Weather	rization- Refrigerator Replacement	2016	in 2017	in 2018	2019	2020	\$
	Low Income Weather	rization- Tier 1	2016	in 2017	in 2018	2019	2020	\$ \$
	Low Income Weather Low Income Weather Low Income Weather	rization- Tier 1 rization- Tier 2	2016	in 2017	in 2018	2019	2020	\$ \$ \$4
	Low Income Weather Low Income Weather Low Income Weather Low Income Neighbo	rization- Tier 1 rization- Tier 2	2016	in 2017	in 2018	2019	2020	\$ \$ \$ 4
	Low Income Weather Low Income Weather Low Income Weather Low Income Neighbo NES Attic Insulation	rization- Tier 1 rization- Tier 2	2016	in 2017	in 2018	2019	2020	\$ \$ \$4 ## \$
	Low Income Weather Low Income Weather Low Income Weather Low Income Neighbo NES Attic Insulation NES Air Sealing	rization- Tier 1 rization- Tier 2	2016	in 2017	in 2018	2019	2020	\$ \$ ## \$ \$ 1
	Low Income Weather Low Income Weather Low Income Weather Low Income Neighbo NES Attic Insulation NES Air Sealing NES Duct Sealing	rization- Tier 1 rization- Tier 2 rhood	2016	in 2017	in 2018	2019	2020	\$ \$ 4 ## \$ \$ 1 \$ 1
	Low Income Weather Low Income Weather Low Income Weather Low Income Neighbo NES Attic Insulation NES Air Sealing	rization- Tier 1 rization- Tier 2 rhood	2016	in 2017	in 2018	2019	2020	\$ \$ \$ 4 ## \$ \$ 1 \$ 1 21

January 2019

In addition to a continued focus on individual program opportunities, Collaborative stakeholders decided in January 2019 to select two priority focus areas for the year:

- Finding ways to increase savings impact for low-income customers
- Assessing Portfolio Level Opportunities and Challenges

The choice to focus on Portfolio Level Opportunities and Challenges was driven by a desire to establish a common understanding among Collaborative participants around the cross-cutting factors that could impact the potential for expanding energy efficiency savings through individual programs. It also provided a way to identify the broader dynamics that would impact *total* energy efficiency savings in the years to come. The opportunities and challenges outlined below provide valuable context and help hone our attention on areas for future work together in the Collaborative for 2020 and beyond.

#### **Primary Objective**

Through regular convenings of utility staff, energy efficiency advocates and other key stakeholders, the Collaborative strives to facilitate Duke's ability to increase total savings from its energy efficiency and demand response program portfolios and to expand the number and types of customers participating in the company's EE/DSM programs.

Successful engagement requires a two-way flow of information to bring information to Duke from the Collaborative and to the Collaborative from Duke.

#### The 1% Savings Target

The 1% savings target originated with a Settlement Agreement between the Environmental Defense Fund, South Carolina Coastal Conservation League and Duke Energy on December 8<sup>th</sup>, 2011 as part of the Duke / Progress merger.

- An annual savings target of one percent (1%) of the previous year's retail electricity sales beginning in 2015; and
- A cumulative savings target of seven percent (7%) of retail electricity sales over the five-year time period of 2014-2018
- Compliance subject to existing NCUC and SCPSC EE program approval process using standard cost-effectiveness tests
- Savings verified by rigorous EM&V

Duke Energy Carolinas reached the 1% target in 2017 and 2018. Duke Energy Progress has come close with 0.94 in 2015, though, savings in subsequent years were lower.

Advocates continue to support efforts to reach or surpass the 1% target year after year. As documented in its annual DSM/EE Recovery Rider filings, Duke has shown that its energy efficiency programs deliver substantial financial benefit to customers, and advocates want to maximize this benefit while also

achieving other organizational priorities related to environment and equity. The 1% savings target serves as a guide for identifying additional savings potential and tracking performance drivers, which was a key factor in the Collaborative prioritizing an examination of Portfolio Level Opportunities and Challenges in 2019. Advocates believe that the reference achievements of other jurisdictions—in some cases 2% of retail sales or greater—are another strong indication that 1% savings is achievable in the Carolinas, even given differences in climate, energy costs, and EM&V practices.

Duke currently seeks to achieve the largest amount of cost-effective savings with the least effect on customer rates. This approach is evident in Duke's preference for incentives and administrative costs to be as low as possible without jeopardizing program performance, and for programs to exceed 1.0 UCT scores by a wide margin. Additionally, regulators have been supportive of programs that are as cost effective as possible.

Advocates, while appreciative of Duke's focus, believe that increasing participation and savings may justify increased program expenditures, even if the cost effectiveness score margin declines somewhat and rate impacts are somewhat greater. Advocates acknowledge the need for programs to be cost-effective, and support inclusion of all avoided utility costs and appropriate consideration of a more comprehensive range of customer and social benefits in cost-effectiveness calculations.

Often, utility performance or Energy Efficiency Resources Standards ("EERS") targets set by other states are used as reference points for savings potential. Duke asserts that those comparisons are often misleading and are not an accurate benchmark given wide variations in how savings attribution is determined in different jurisdictions. Duke believes that choosing 1% as the savings target is arbitrary unless it is based on a utility-specific market potential study. Although DEC has achieved 1% of savings in the past, Duke is uncertain that it will be able to achieve similar savings in the future for the following reasons:

- Federal lighting standards impacts are significant and unknown
- Falling avoided costs may undermine cost effectiveness and limit the programs Duke can offer
- EM&V rigor holds Duke to a higher standard than neighboring utilities
- Incremental savings erosion from increasing appliance standards and market saturation drives up costs and drives down net savings
- Increasing numbers of opt out customers fueled by the snowball effect of more savings driving higher rates and additional opt outs

Many members of the Collaborative noted that the 1% benchmark does not reflect the full range of benefits that can be pursued through demand side management, nor does it ensure that different customer segments are receiving those benefits equitably. For instance, the 1% target does not capture the benefits of demand response programs and does not distinguish from what sectors the savings are

<sup>&</sup>lt;sup>1</sup> Market potentials studies, while a valuable source of information, are inherently conservative and typically do not represent the upper limit of what is cost effectively possible to achieve.

achieved, nor does it adjust for customers who are ineligible to participate based on their opted-out status.

These considerations prompted the Collaborative to ask whether there are additional metrics that warrant attention for assessing Duke's performance, such as:

- Lifecycle savings targets that give the utility credit for a measure's lifetime savings for every year in which the savings occur, rather than only recognizing the first year savings in the year the measure is installed.
- Cumulative savings where a target is set over several years and the incremental savings accumulate year over year.
- Capacity savings targets that recognize the beneficial effects of demand response and efficiency programs that shift load to periods of lower demand.
- Customer-related targets that set specific goals to encourage efforts to increase savings among historically underserved demographics.
- Growth-related targets focus on proactively capturing savings from new load and new customers coming onto the system.

#### Pressure on savings:

A number of issues outside the influence of the Collaborative in its advisory forum role have a direct or indirect effect on the Company's ability to achieve energy savings through regulated customer programs. There are numerous factors listed below that are expected to put downward pressure on savings, while others will likely lead to increased savings opportunities. Some will have effects that are uncertain at this time.

- Market Dynamics Limiting Utility Efficiency Savings:
  - Natural adoption of efficiency without utility participation is increasing
  - Cost per unit of savings has been increasing (though new technologies have the potential to change this)
  - More stringent federal standards reduce the incremental savings that can be attributed to utility efficiency programs
  - Increasing socket saturation for standard screw-base LED bulbs
  - Lower contractor capacity in some regions
  - Falling avoided costs
- Market Dynamics Supporting Increased Utility Efficiency Savings:
  - Emerging technologies, such as:
    - Advanced Metering Infrastructure and Wi-fi thermostats
    - Smart appliances
    - Smart phone applications
    - Heat pump water heaters

- Minisplits
- Induction cooktop stoves
- Grid modernization that allows for geographically targeted efficiency deployment
- Electrification opportunities and growth of the utility customer base (in some areas)
- Aging housing stock
- Increasing attention to winter demand peaks
- Opportunities to improve contractor/vendor education and implementation standards or practices.
- Availability of New and Diverse Delivery Channels
  - Midstream and upstream opportunities
  - Real-time communication with customers
  - Customer access to data
  - Customer segmentation and targeting
  - Vendor innovation (eg. residential savings guarantees)
- Related State Policy and Regulatory Matters
  - Commercial and industrial customer opt out statutes
  - Potential changes in cost effectiveness testing
  - o Inclusion of Non-Energy Benefits
  - Increasing building codes
  - Expansion of and coordination with gas industry energy efficiency programs
  - Gas industry opposition to fuel switching
  - Utility performance incentive mechanism constraints
  - Current lack of low income utility performance incentive and defined low-income cost effectiveness expectations
  - Integrated Resource Planning requirements (energy efficiency as a resource, etc.)
  - Executive Order 80 (reducing energy and water in gov't buildings, decarbonization, electric transportation)
  - o Renewable Energy Portfolio Standard and associated energy efficiency targets
  - Establishing or coordinating with energy efficiency financing opportunities

#### Portfolio-level Program Issues

Many members of the Collaborative consider 1% achievable if the Company adds new programs or improves and expands existing ones.

Some members suggest that the Collaborative should assist Duke in tackling the following program-related tasks:

- Find new delivery channels through improved marketing (midstream incentives, bulk replacement, community based nonprofit organizations, etc.)
- Find new sources of funding to leverage (WAP, LIHTC, REAP, Green Bank, PACE, etc.)
- Design programs around new technologies (remote monitoring, etc.)
- Design program(s) that leverage existing expertise by providing leads to contractors that perform EE projects (midstream labor)
- Expand trade ally engagement and minimize barriers to participation
- Provide insights from other utilities which have stronger adoption of measures which underperform in Duke's programs
- Build on existing Duke programs that have been successful
- Investigate ways to incorporate energy code compliance training into EE programming (new construction and existing for both residential and non-residential)
- Expand the reach and impact of Low- and Moderate Income programs
- Avoid lost opportunities in new homes, businesses and communities by developing growthrelated initiatives
- Provide offerings that address the needs of small and medium-size commercial customers

Duke currently has a full-time staff of marketing professionals and a team of employees dedicated to new product development. The managers of existing programs are motivated to improve and expand their programs whenever they see opportunities to do so.

Duke proposes that the best contributions for the Collaborative to make are the following:

- Bring the company details about programs Duke does not have but that other utilities are running successfully
- Represent the interests of the constituencies each member's organization serves to eliminate the likelihood that Duke's programs will leave any customers out
- Express support before the state commissions for the Company's efforts to expand and improve programs
- Promote Duke's programs outside the Collaborative

#### Areas of Focus for 2020

The following program ideas have emerged as potential areas of focus for 2020:

- DEC Residential New Construction
- DEP Income Qualified Weatherization

January 2019

- Energy Star Retail Products Platform
- Mobile/manufactured home programs
- Code Compliance Credit justification
- Leveraging savings from Advanced Metering Infrastructure
- Expanded midstream products, such as residential HVAC
- Leveraging alternative funding opportunities such as the Rural Energy for America Program
- Seeking new program opportunities to increase low income savings impact (including continued support for LIHTC developers)
- Explore expanded low-income program coordination with SC WAP.



**Duke Energy Carolinas Collaborative Meeting** 

March 19, 2020



# **Meeting Agenda**

- Safety
- Regulatory Update
- Market Potential Study Update
- Residential Program Updates
- ISOP Planning
- Lunch
- Nonresidential Program Updates
- New Program Ideas
- Wrap Up and Scheduling

### **Safety**

# **Meeting Safety**

- What to do in case of Evacuation
- What to do in case of Emergency

# Cold and Flu Safety Tips

- Avoid close contact with people who are sick.
- Avoid touching your eyes, nose, and mouth.
- Stay home when you are sick.
- Cover your cough or sneeze with a tissue, then throw the tissue in the trash.
- Clean and disinfect frequently touched objects and surfaces
- Wash your hands often with soap and water for at least 20 seconds, especially after going to the bathroom; before eating; and after blowing your nose, coughing, or sneezing.

# 9 in 10 employees come to work sick, survey shows

Among the 28 U.S. cities in the study, Charlotte, Miami (96 percent each), Austin, Chicago, and Cincinnati (93 percent each) had the most employees who show up while feeling ill.



### **Regulatory Update**

### North Carolina

• DEC Filing February 25, 2019, E-7 sub 1230

### South Carolina

• DEC Filing March 2, 2019, 2020-83-E

- Program filings:
  - Residential New Construction negotiations ongoing post-technical conference
  - Program modifications (NES 2.0, Home Energy House Call, DRA)
  - New Mechanism
    - Comments filed, awaiting NCUC action
    - Moving discussion to SC



**Program Year End Updates** 2019



## Portfolio Summary : DEC

### **2019 Portfolio Summary**

Demand (MW) Actual	Energy (MWh)	Actual Expenditures	Performance Incentives	Total Annual Energy Sales	% of Energy Sales	UCT Score	TRC Score
1,103.00	844,287	\$150,420,388	\$33,457,516	49,620,203	2%	2.91	2.69

### **Company Statistics**

#### Prior Year & YTD Revenues & Expenditures

		Budget		Actual	
Program Year	Total Revenue (\$MM)	Portfolio Budget	% of Revenue	Portfolio Spending	% of Revenue
2016	\$7,322	\$123,781,349	1.7%	\$151,574,107	2.1%
2017	\$7,302	\$130,617,734	1.8%	\$192,488,915	2.6%
2018	\$7,300	\$141,778,571	1.9%	\$159,005,671	2.2%
2019	\$7,395	\$144,837,499	2.0%	\$150,420,388	2.0%

#### Energy

		Budget		Acti	ual
Program Year	Prior Yr Annual Energy Sales (Net of Opt-Out)	Net Annual Savings	% of Energy Sales	Net Annual Savings	% of Energy Sales
2016	54,596,302	591,015	1.1%	801,779	1.5%
2017	54,309,422	608,070	1.1%	934,676	1.7%
2018	51,467,402	816,508	1.6%	887,162	1.7%
2019	49,620,203	781,394	1.6%	844,287	1.7%



#### Note:

Actual Annual Savings Portfolio Spending & Total Revenue reflect Year-to-date values

## Portfolio Summary : DEP

### **2019 Portfolio Summary**

Demand (MW) Actual	Energy (MWh)	Actual Expenditures	Performance Incentives	Total Annual Energy Sales	% of Energy Sales	UCT Score	TRC Score
133.57	366,018	\$87,400,540	\$15,017,088	28,182,233	1%	2.40	2.32

### **Company Statistics**

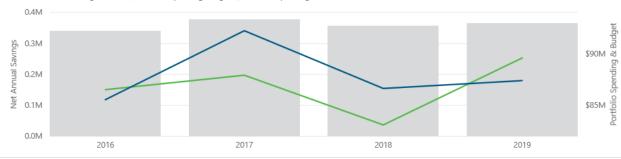
#### Prior Year & YTD Revenues & Expenditures

		Budget		Actual	
Program Year	Total Revenue (\$MM)	Portfolio Budget	% of Revenue	Portfolio Spending	% of Revenue
2016	\$5,277	\$86,525,157	1.6%	\$85,558,746	1.6%
2017	\$5,129	\$87,923,780	1.7%	\$92,232,546	1.8%
2018	\$5,699	\$83,107,282	1.5%	\$86,641,573	1.5%
2019	\$5,957	\$89,592,768	1.5%	\$87,400,540	1.5%

#### Energy

		Budget		Acti	ual
Program Year	Prior Yr Annual Energy Sales (Net of Opt-Out)	Net Annual Savings	% of Energy Sales	Net Annual Savings	% of Energy Sales
2016	31,454,848	351,831	1.1%	339,918	1.1%
2017	30,908,887	350,851	1.1%	378,262	1.2%
2018	29,943,275	324,305	1.1%	356,587	1.2%
2019	28,182,233	341,047	1.2%	366,018	1.3%





#### Note:

Actual Annual Savings Portfolio Spending & Total Revenue reflect Year-to-date values

### **DEC Portfolio Support**

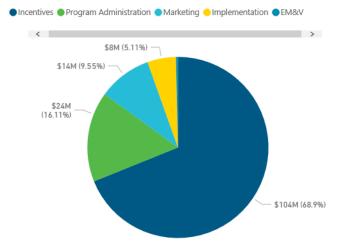
#### 2019 EE Portfolio Expenditures by Program Program Actual Costs **Budget Costs** Program Type **Energy Assessments** Residential-EE \$2,987,118 \$3,186,888 Energy Efficiency Education Residential-EE \$1,684,083 \$2,104,087 80% Energy Efficient Appliances and Devices Residential-EE \$41,380,987 \$21,726,700 190% HVAC Energy Efficiency Residential-EE \$7,400,669 \$4,802,289 154% Income Qualified Energy Efficiency and Weatherization Assistance Residential-EE \$7,342,133 \$7,905,880 93% Multi-Family Energy Efficiency Residential-EE \$3,680,155 \$3,382,816 109% My Home Energy Report Residential-EE \$10.555.159 \$13,406,971 PowerManager Residential-DSM \$13,383,639 \$14,055,575 Non Residential Energy Efficient ITEE Non-Residential-EE \$44,323 \$749,325 Non Residential Energy Efficient Process Equipment Products Non-Residential-EE \$119,811 \$240,281 50% Non Residential Energy Efficient Pumps and Drives Products Non-Residential-EE \$189,123 \$1,165,434 Non Residential Smart Saver Custom Non-Residential-EE \$8,871,440 \$10,095,189 Non Residential Smart Saver Custom Technical Assessments Non-Residential-EE \$295,925 \$1,618,240 18% Non Residential Smart Saver Energy Efficient Food Service Products Non-Residential-EE \$339,904 \$2,010,534 17% Non Residential Smart Saver Energy Efficient HVAC Products Non-Residential-EE \$2,207,760 \$5,762,803 Non Residential Smart Saver Energy Efficient Lighting Products Non-Residential-EE \$20,829,118 \$17,828,618 Non Residential Smart Saver Performance Incentive Non-Residential-EE \$784,949 \$3,162,160 25% Small Business Energy Saver Non-Residential-EE \$11,418,264 \$14,602,066 EnergyWise for Business Non-Residential-DSM \$3,686,451 \$3,967,504 93% PowerShare Non-Residential-DSM \$13,019,606 \$13,263,911 98% Total \$150,420,388 \$144,837,499

#### 2019 EE Portfolio Expenditure Summary by Cost Type Cost Category % of Total Budget Costs Actual Costs EM&V 0.67% \$977,000 \$512,097 0.34% Implementation 5.60% \$8,104,227 \$7,679,277 5.11% Incentives 61.33% \$88,824,951 \$103,632,631 68.90% Marketing 13.46% \$19,496,106 \$14,361,529 9.55% Program Administration 18.94% \$27,435,216 \$24,234,855 16.11%

100.00% \$144,837,499 \$150,420,388

100.00%

Total



### **DEP Portfolio Support**

EnergyWise for Business

Total

#### 2019 EE Portfolio Expenditures by Program Program Actual Costs Budget Costs % Program Type Appliances and Devices Residential-EE \$1,226,733 \$1,527,511 Energy Education Program for Schools Residential-EE \$745,829 \$753,793 99% Energy Efficient Lighting Residential-EE \$14,346,463 \$13,209,118 109% Low Income Weatherization Pilot Residential-EE \$27,295 \$0 096 Multi-Family Residential-EE \$2,151,724 \$2.738.339 79% My Home Energy Report Residential-EE \$6,746,551 \$7,994,059 Residential-EE Neighborhood Energy Saver \$1,667,723 \$2,028,200 82% Residential Energy Assessments Residential-EE \$2,109,106 \$1,138,481 185% Residential New Construction Residential-EE \$15,080,405 \$12,691,351 119% Residential Smart\$aver Residential-EE \$3,985,069 161% \$6,397,527 EnergyWise Residential-DSM \$14,537,464 \$14,086,536 103% Non-Residential Smart\$aver Custom Non-Residential-EE \$2,769,305 \$2,719,960 102% Non-Residential Smart\$aver Performance Non-Residential-EE \$269,460 \$845,910 32% Non-Residential Smart\$aver Prescriptive Non-Residential-EE \$7,948,870 \$11,408,405 70% Small Business Energy Saver Non-Residential-EE \$7,346,426 \$9,294,966 79% Commercial, Industrial, & Governmental Demand Response Non-Residential-DSM \$1,647,027 \$2,694,260 61%

Non-Residential-DSM

\$2,382,632

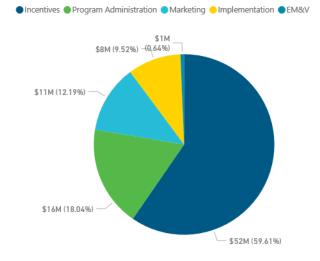
\$2,476,808

\$87,400,540 \$89,592,768 98%

96%

2019 EE Portfolio Expenditure Summary by Cost Type

Cost Category	% of Total	Budget Costs	Actual Costs	% of Total
EM&V	1.37%	\$1,225,000	\$560,428	0.64%
Implementation	7.34%	\$6,573,038	\$8,324,514	9.52%
Incentives	56.31%	\$50,453,958	\$52,098,767	59.61%
Marketing	13.34%	\$11,953,585	\$10,652,278	12.19%
Program Administration	21.64%	\$19,387,187	\$15,764,554	18.04%
Total	100.00%	\$89,592,768	\$87,400,540	100.00%





**Residential Program Updates** 



# **Income-Qualified Programs**

## **Neighborhood Energy Savers**

Income Qualified Energy Efficiency and Weatherization Assistance<sup>1</sup>

	Vintage 2019	Vintage 2019	% of
\$ in millions, rounded	As Filed	YTD December 31, 2019	Target
NPV of Avoided Cost	\$1.5	\$3.6	239%
Program Cost	\$7.9	<b>\$7.3</b>	93%
MW	0.6	1.1	173%
MWH	4,043.4	9,029.8	223%
Units	10,114	10,814	107%

<sup>1)</sup> Values are reflected at the system level.

2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	2,135	3,829	1,694
Savings (MW)	0.33	0.52	0.19
Participants		5,825	
2019 Program Expenses		\$1,695,018	

### **Neighborhood Energy Savers**

- Served the communities in the following towns:
  - Bessemer City, Burlington, Charlotte, Durham, Greensboro, Hickory, Kannapolis, Winston-Salem, Spring Lake, Dunn, Rockingham
  - Greenville, Kershaw, Spartanburg, Manning, Florence

NES	Goal	Actual
DEC NC	6,516	6,625
DEC SC	2,410	3,193
DEP NC	3,825	2,722
DEP SC	675	1,795

### Weatherization and Equipment Replacement, Refrigerator Replacement

- working with the NC and SC Weatherization Agencies to deliver this program
- 736 homes received weatherization in conjunction with the DOE weatherization program, with 292 refrigerators replaced, 69 Tier 1 services provided and 667 Tier 2 services provided

Weatherization	Goal	Actual			
DEC NC	880	736			
DEC SC	60	16			
Refrigerator Replacement					
DEC NC	150	222			
DEC SC	15	70			

Combined			
DEC Wx - Project Type	Projects	То	tal Paid
Refrigerator Replacement	190	\$	158,940.83
Weatherization Tier 1	70	\$	39,428.03
Weatherization Tier 2	353	\$	910,446.96
HVAC Replacment	238	\$1	1,404,793.47
Total	851	\$2	2,513,609.29

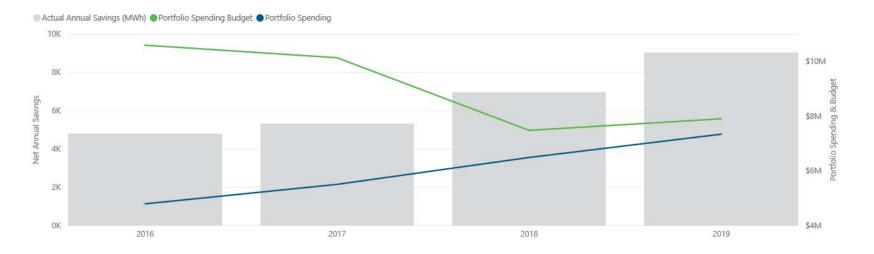
NC			
DEC Wx - Project Type	Projects	То	tal Paid
Refrigerator Replacement	120	\$	104,706.00
Weatherization Tier 1	70	\$	39,428.03
Weatherization Tier 2	353	\$	910,446.96
HVAC Replacment	222	\$1	1,316,592.01
Total	765	\$2	2,371,173.00

SC			
DEC Wx - Project Type	Projects	То	tal Paid
Refrigerator Replacement	70	\$	54,234.83
Weatherization Tier 1			
Weatherization Tier 2			
HVAC Replacment	16	\$	88,201.46
Total	86	\$	142,436.29

### **DEC NES and Weatherization**

#### Income Qualified Energy Efficiency and Weatherization Assistance Program Budget, Savings & Number of Measures

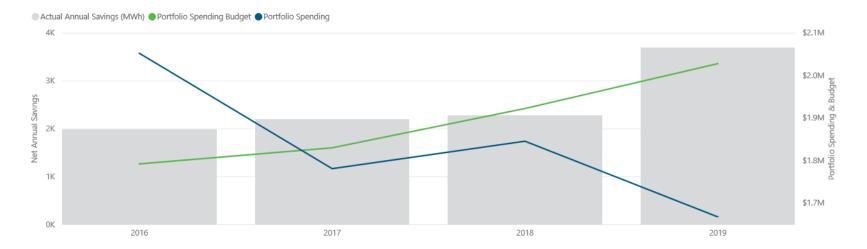
	Ехре	nditures		Ene	rgy Savings		Den	nand Savings		P:	articipants	
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget -	Actual	%
2017	\$10,141,446	\$5,505,992	54%	5,310	5,342	101%	1.05	0.77	74%	10,538	11,726	111%
2019	\$7,905,880	\$7,342,133	93%	4,043	9,030	223%	0.64	1.11	173%	10,114	10,814	107%
2018	\$7,483,328	\$6,490,735	87%	5,287	6,973	132%	0.82	0.90	110%	10,426	10,681	102%
2016	\$10,601,322	\$4,792,436	45%	5,010	4,801	96%	1.00	0.65	65%	10,421	9,339	90%



### **DEP NES**

### Neighborhood Energy Saver Program Budget, Savings & Number of Measures

	Ехреі	nditures		Energy Savings		Demand Savings			Participants			
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget 🔻	Actual	%
2018	\$1,922,686	\$1,845,739	96%	2,033	2,279	112%	0.31	0.35	112%	4,503	5,047	112%
2017	\$1,830,237	\$1,781,211	97%	1,735	2,200	127%	0.30	0.34	110%	4,500	4,873	108%
2019	\$2,028,200	\$1,667,723	82%	2,135	3,699	173%	0.33	0.49	151%	4,729	4,517	96%
2016	\$1,792,345	\$2,052,535	115%	1,735	1,992	115%	0.30	0.30	100%	4,500	4,412	98%



# Programs that are free to Participants

## **Multi-Family Energy Efficiency**

Multi-Family Energy Efficiency<sup>1</sup>

	Vintage 2019	Vintage 2019	% of
<u>\$ in millions, rounded</u>	As Filed	YTD December 31, 2019	Target
NPV of Avoided Cost	\$9.6	\$11.9	124%
Program Cost	\$3.4	\$3.7	109%
MW	2.0	2.6	132%
MWH	19,846.4	24,086.2	121%
Units	342,660	493,307	144%

<sup>1)</sup> Values are reflected at the system level.

2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	15,206	14,966	-240
Savings (MW)	2.13	2.05	-0.09
Participants		389,131	
2019 Program Expenses		\$3,081,002	

### **Multi-Family Energy Efficiency**

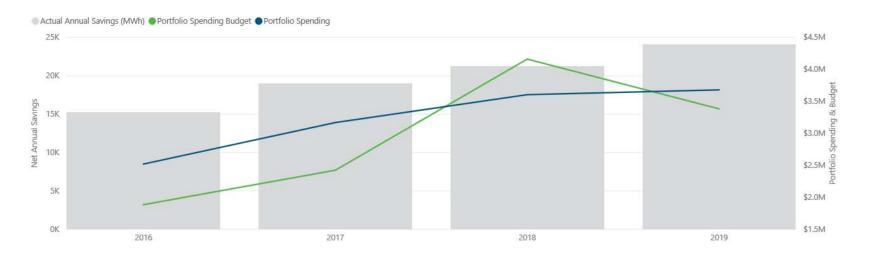
- Total 112 properties in DEP (15, 763 units) and 293 in DEC (46,422 units)
- 71+% lighting measures, remaining is water measures
- Marketing:
  - Outbound calls and on-site visits to property managers
  - Apartment association memberships, trade shows
  - Public website
  - Brochures
  - Tenant materials

Multifamily								
Jurisdiction	Properties	Units						
DEC - NC	161	26,087						
DEC - SC	20	4,572						
DEP - NC	101	15,002						
DEP - SC	11	761						
Grand Total	293	46,422						

### **DEC Multifamily**

#### Multi-Family Energy Efficiency Program Budget, Savings & Number of Measures

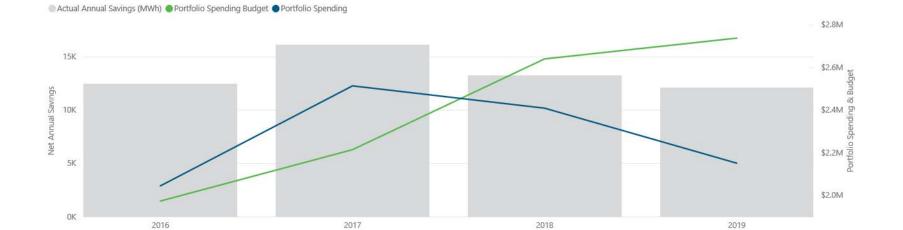
	Expe	nditures		Ene	rgy Savings		Den	nand Savings		P	articipants	
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2019	\$3,382,816	\$3,680,155	109%	19,846	24,086	121%	2.00	2.65	132%	342,660	493,307	144%
2018	\$4,161,326	\$3,604,921	87%	22,582	21,289	94%	2.20	2.30	105%	370,882	430,475	116%
2017	\$2,422,689	\$3,168,422	131%	12,688	19,056	150%	1.19	1.92	161%	186,948	356,003	190%
2016	\$1,883,584	\$2,518,988	134%	12,320	15,235	124%	1.02	1.57	154%	151,004	269,671	179%



### **DEP Multifamily**

### Multi-Family Program Budget, Savings & Number of Measures

Expe	nditures		Energy Savings		Demand Savings			Participants			
Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
\$2,215,099	\$2,514,413	114%	10,444	16,151	155%	1.02	2.05	200%	201,072	297,837	148%
\$2,640,920	\$2,409,743	91%	13,579	13,292	98%	1.84	1.74	95%	264,177	288,093	109%
\$2,738,339	\$2,151,724	79%	15,206	12,107	80%	2.13	1.62	76%	291,444	285,365	98%
\$1,974,027	\$2,045,220	104%	10,993	12,462	113%	1.08	1.48	137%	211,656	240,436	114%
	\$2,215,099 \$2,640,920 \$2,738,339	\$2,215,099 \$2,514,413 \$2,640,920 \$2,409,743 \$2,738,339 \$2,151,724	Budget         Actual         %           \$2,215,099         \$2,514,413         114%           \$2,640,920         \$2,409,743         91%           \$2,738,339         \$2,151,724         79%	Budget         Actual         %         Budget           \$2,215,099         \$2,514,413         114%         10,444           \$2,640,920         \$2,409,743         91%         13,579           \$2,738,339         \$2,151,724         79%         15,206	Budget         Actual         %         Budget         Actual           \$2,215,099         \$2,514,413         114%         10,444         16,151           \$2,640,920         \$2,409,743         91%         13,579         13,292           \$2,738,339         \$2,151,724         79%         15,206         12,107	Budget         Actual         %         Budget         Actual         %           \$2,215,099         \$2,514,413         114%         10,444         16,151         155%           \$2,640,920         \$2,409,743         91%         13,579         13,292         98%           \$2,738,339         \$2,151,724         79%         15,206         12,107         80%	Budget         Actual         %         Budget         Actual         %         Budget           \$2,215,099         \$2,514,413         114%         10,444         16,151         155%         1.02           \$2,640,920         \$2,409,743         91%         13,579         13,292         98%         1.84           \$2,738,339         \$2,151,724         79%         15,206         12,107         80%         2.13	Budget         Actual         %         Budget         Actual         %         Budget         Actual           \$2,215,099         \$2,514,413         114%         10,444         16,151         155%         1.02         2.05           \$2,640,920         \$2,409,743         91%         13,579         13,292         98%         1.84         1.74           \$2,738,339         \$2,151,724         79%         15,206         12,107         80%         2.13         1.62	Budget         Actual         %         Budget         Actual         %         Budget         Actual         %           \$2,215,099         \$2,514,413         114%         10,444         16,151         155%         1.02         2.05         200%           \$2,640,920         \$2,409,743         91%         13,579         13,292         98%         1.84         1.74         95%           \$2,738,339         \$2,151,724         79%         15,206         12,107         80%         2.13         1.62         76%	Budget         Actual         %         Budget         Actual         %         Budget         Actual         %         Budget         Actual         %         Budget           \$2,215,099         \$2,514,413         114%         10,444         16,151         155%         1.02         2.05         200%         201,072           \$2,640,920         \$2,409,743         91%         13,579         13,292         98%         1.84         1.74         95%         264,177           \$2,738,339         \$2,151,724         79%         15,206         12,107         80%         2.13         1.62         76%         291,444	Budget         Actual         %         Budget         Actual         %         Budget         Actual         %         Budget         Actual           \$2,215,099         \$2,514,413         114%         10,444         16,151         155%         1.02         2.05         200%         201,072         297,837           \$2,640,920         \$2,409,743         91%         13,579         13,292         98%         1.84         1.74         95%         264,177         288,093           \$2,738,339         \$2,151,724         79%         15,206         12,107         80%         2.13         1.62         76%         291,444         285,365



### **My Home Energy Reports (MyHER)**

My Home Energy Report<sup>1</sup>

	Vintage 2019	Vintage 2019	% of
\$ in millions, rounded	As Filed	YTD December 31, 2019	Target
NPV of Avoided Cost	\$20.9	\$23.4	112%
Program Cost	\$13.4	\$10.6	79%
MW <sup>2</sup>	79.4	91.4	115%
MWH <sup>2</sup>	312,934.1	328,439.1	105%
Units <sup>3</sup>	1,364,000	1,339,152	98%

- 1) Values are reflected at the system level.
- 2) Values represent the annual MW and MWH savings associated with the December 2019 month end participation.
- 3) At month-end December 2019, single-family participation was 1,183,442, while multifamily participation was 155,710.

2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	119,273	154,602	35,329
Savings (MW)	20.01	54.25	34.24
Participants		769,490	
2019 Program Expenses		\$6,746,551	

# My Home Energy Reports (MyHER)

Total DEC			
NC		SC	
Single Family	68%	Single Family	21%
Paper	63%	Paper	19%
Online	5%	Online	2%
Multifamily	9%	Multifamily	2%
Paper	9%	Paper	2%
Online	0.7%	Online	0.2%

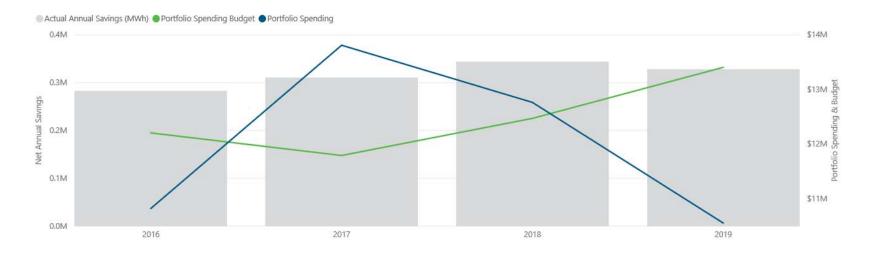
Total DEP			
NC		SC	
Single Family	82%	Single Family	9%
Paper	76%	Paper	9%
Online	6%	Online	0.6%
Multifamily	8%	Multifamily	1%
Paper	7%	Paper	1%
Online	0.4%	Online	0.1%

## **DEC My Home Energy Reports**

#### My Home Energy Report Program Budget, Savings & Number of Measures

2	
300	

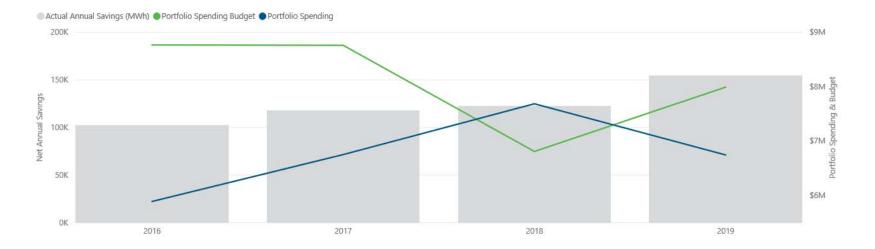
Exper	nditures		Ene	rgy Savings		Den	nand Savings		P	articipants	
Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
\$12,472,487	\$12,765,286	102%	304,387	344,760	113%	77.28	95.89	124%	1,354,138	1,432,263	106%
\$11,792,498	\$13,812,250	117%	211,048	311,369	148%	56.98	79.07	139%	1,050,000	1,394,693	133%
\$13,406,971	\$10,555,159	79%	312,934	328,439	105%	79.36	91.39	115%	1,364,000	1,339,152	98%
\$12,206,008	\$10,822,444	89%	204,880	283,570	138%	55.32	71.81	130%	1,050,000	1,202,664	115%
	\$12,472,487 \$11,792,498 \$13,406,971	\$12,472,487 \$12,765,286 \$11,792,498 \$13,812,250 \$13,406,971 \$10,555,159	Budget         Actual         %           \$12,472,487         \$12,765,286         102%           \$11,792,498         \$13,812,250         117%           \$13,406,971         \$10,555,159         79%	Budget         Actual         %         Budget           \$12,472,487         \$12,765,286         102%         304,387           \$11,792,498         \$13,812,250         117%         211,048           \$13,406,971         \$10,555,159         79%         312,934	Budget         Actual         %         Budget         Actual           \$12,472,487         \$12,765,286         102%         304,387         344,760           \$11,792,498         \$13,812,250         117%         211,048         311,369           \$13,406,971         \$10,555,159         79%         312,934         328,439	Budget         Actual         %         Budget         Actual         %           \$12,472,487         \$12,765,286         102%         304,387         344,760         113%           \$11,792,498         \$13,812,250         117%         211,048         311,369         148%           \$13,406,971         \$10,555,159         79%         312,934         328,439         105%	Budget         Actual         %         Budget         Actual         %         Budget           \$12,472,487         \$12,765,286         102%         304,387         344,760         113%         77.28           \$11,792,498         \$13,812,250         117%         211,048         311,369         148%         56,98           \$13,406,971         \$10,555,159         79%         312,934         328,439         105%         79.36	Budget         Actual         %         Budget         Actual         %         Budget         Actual           \$12,472,487         \$12,765,286         102%         304,387         344,760         113%         77.28         95.89           \$11,792,498         \$13,812,250         117%         211,048         311,369         148%         56.98         79.07           \$13,406,971         \$10,555,159         79%         312,934         328,439         105%         79.36         91.39	Budget         Actual         %         Budget         Actual         %         Budget         Actual         %           \$12,472,487         \$12,765,286         102%         304,387         344,760         113%         77.28         95.89         124%           \$11,792,498         \$13,812,250         117%         211,048         311,369         148%         56.98         79.07         139%           \$13,406,971         \$10,555,159         79%         312,934         328,439         105%         79.36         91.39         115%	Budget         Actual         %         Budget         Actual         %         Budget         Actual         %         Budget           \$12,472,487         \$12,765,286         102%         304,387         344,760         113%         77.28         95.89         124%         1,354,138           \$11,792,498         \$13,812,250         117%         211,048         311,369         148%         56.98         79.07         139%         1,050,000           \$13,406,971         \$10,555,159         79%         312,934         328,439         105%         79.36         91.39         115%         1,364,000	Budget         Actual         %         Budget         Actual         %         Budget         Actual         %         Budget         Actual           \$12,472,487         \$12,765,286         102%         304,387         344,760         113%         77.28         95.89         124%         1,354,138         1,432,263           \$11,792,498         \$13,812,250         117%         211,048         311,369         148%         56.98         79.07         139%         1,050,000         1,394,693           \$13,406,971         \$10,555,159         79%         312,934         328,439         105%         79.36         91.39         115%         1,364,000         1,339,152



## **DEP My Home Energy Reports**

### My Home Energy Report Program Budget, Savings & Number of Measures

	Expe	nditures		Ene	rgy Savings		Den	nand Savings		Pa	articipants	
Program	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
Year										÷		
2018	\$6,810,235	\$7,687,891	113%	132,895	122,685	92%	36.11	20.78	58%	673,400	9,578,379	1422%
2017	\$8,763,955	\$6,753,153	77%	133,917	117,852	88%	36.39	19.96	55%	682,300	8,775,108	1286%
2016	\$8,770,681	\$5,890,093	67%	133,917	102,921	77%	36.39	16.91	46%	682,300	7,909,262	1159%
2019	\$7,994,059	\$6,746,551	84%	119,273	154,602	130%	20.01	54.25	271%	797,000	769,490	97%



## EE in Education

Energy Efficiency Education<sup>1</sup>

	Vintage 2019	Vintage 2019	% of
\$ in millions, rounded	As Filed	YTD December 31, 2019	Target
NPV of Avoided Cost	\$2.6	\$2.5	98%
Program Cost	\$2.1	\$1.7	80%
MW	1.3	0.8	63%
MWH	5,701.5	6,713.8	118%
Units	26,705	24,785	93%

<sup>1)</sup> Values are reflected at the system level.

2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	2,315	3,284	969
Savings (MW)	0.98	0.39	-0.59
Participants		9,887	
2019 Program Expenses		\$745,829	

### **EE in Education**

DEP		DEC	
NC - PMID 9054		NC - PMID 3627	
Number of Schools	193	Number of Schools	455
Number of Performances	316	Number of Performances	727
Number of Students	69,202	Number of Students	155,286
Number of Kits	8,661	Number of Kits	19,855
SC - PMID 9055		SC - PMID 3629	
Number of Schools	54	Number of Schools	134
Number of Performances	87	Number of Performances	192
Number of Students	17,677	Number of Students	42,992
Number of Kits	1,226	Number of Kits	4,930
Total		Total	
Number of Schools	247	Number of Schools	589
Number of Performances	403	Number of Performances	919
Number of Students	86,879	Number of Students	198,278
Number of Kits	9,887	Number of Kits	24,785

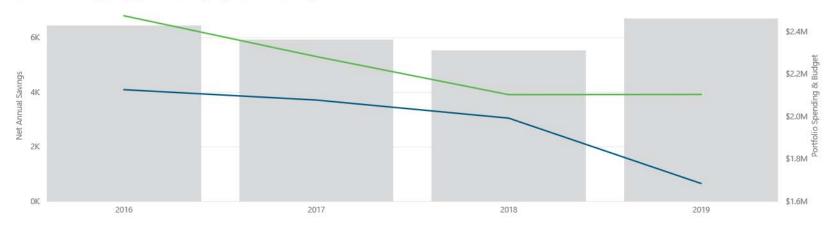
### **DEC EE in Education**

#### Energy Efficiency Education Program Budget, Savings & Number of Measures

Expe	nditures		Ene	rgy Savings		Den	nand Savings		P	articipants	
Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
40.474.000	40.405.500	0.504	5.500		0001			2122			4455/
\$2,474,928	\$2,126,509	86%	6,580	6,441	98%	0.69	1.51	219%	26,250	30,170	115%
\$2,282,458	\$2,077,611	91%	5,604	5,932	106%	1.32	1.39	106%	26,250	27,785	106%
\$2,104,087	\$1,684,083	80%	5,702	6,714	118%	1.34	0.84	63%	26,705	24,785	93%
\$2,103,036	\$1,992,260	95%	5,604	5,531	99%	1.32	0.97	73%	26,250	22,901	87%
	\$2,474,928 \$2,282,458 \$2,104,087	\$2,474,928 \$2,126,509 \$2,282,458 \$2,077,611 \$2,104,087 \$1,684,083	Budget         Actual         %           \$2,474,928         \$2,126,509         86%           \$2,282,458         \$2,077,611         91%           \$2,104,087         \$1,684,083         80%	Budget         Actual         %         Budget           \$2,474,928         \$2,126,509         86%         6,580           \$2,282,458         \$2,077,611         91%         5,604           \$2,104,087         \$1,684,083         80%         5,702	Budget         Actual         %         Budget         Actual           \$2,474,928         \$2,126,509         86%         6,580         6,441           \$2,282,458         \$2,077,611         91%         5,604         5,932           \$2,104,087         \$1,684,083         80%         5,702         6,714	Budget         Actual         %         Budget         Actual         %           \$2,474,928         \$2,126,509         86%         6,580         6,441         98%           \$2,282,458         \$2,077,611         91%         5,604         5,932         106%           \$2,104,087         \$1,684,083         80%         5,702         6,714         118%	Budget         Actual         %         Budget         Actual         %         Budget           \$2,474,928         \$2,126,509         86%         6,580         6,441         98%         0.69           \$2,282,458         \$2,077,611         91%         5,604         5,932         106%         1.32           \$2,104,087         \$1,684,083         80%         5,702         6,714         118%         1.34	Budget         Actual         %         Budget         Actual         %         Budget         Actual           \$2,474,928         \$2,126,509         86%         6,580         6,441         98%         0.69         1.51           \$2,282,458         \$2,077,611         91%         5,604         5,932         106%         1.32         1.39           \$2,104,087         \$1,684,083         80%         5,702         6,714         118%         1.34         0.84	Budget         Actual         %         Budget         Actual         %         Budget         Actual         %           \$2,474,928         \$2,126,509         86%         6,580         6,441         98%         0.69         1.51         219%           \$2,282,458         \$2,077,611         91%         5,604         5,932         106%         1.32         1.39         106%           \$2,104,087         \$1,684,083         80%         5,702         6,714         118%         1.34         0.84         63%	Budget         Actual         %         Budget         Actual         %         Budget         Actual         %         Budget         Actual         %         Budget           \$2,474,928         \$2,126,509         86%         6,580         6,441         98%         0.69         1.51         219%         26,250           \$2,282,458         \$2,077,611         91%         5,604         5,932         106%         1.32         1.39         106%         26,250           \$2,104,087         \$1,684,083         80%         5,702         6,714         118%         1.34         0.84         63%         26,705	Budget         Actual         %         Budget         Actual         %         Budget         Actual         %         Budget         Actual           \$2,474,928         \$2,126,509         86%         6,580         6,441         98%         0.69         1.51         219%         26,250         30,170           \$2,282,458         \$2,077,611         91%         5,604         5,932         106%         1.32         1.39         106%         26,250         27,785           \$2,104,087         \$1,684,083         80%         5,702         6,714         118%         1.34         0.84         63%         26,705         24,785



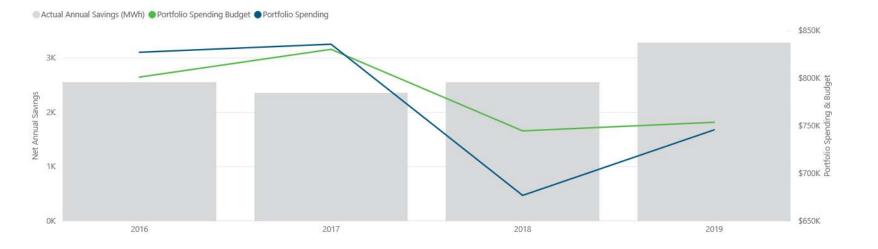




### **DEP EE in Education**

#### Energy Education Program for Schools Program Budget, Savings & Number of Measures

	Exper	nditures		Ene	rgy Savings		Den	nand Savings		P	articipants 🚀	7 E
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2019	\$753,793	\$745,829	99%	2,315	3,284	142%	0.98	0.39	40%	8,952	9,887	110%
2016	\$801,351	\$827,497	103%	1,998	2,554	128%	0.20	1.08	546%	8,800	9,877	112%
2017	\$830,606	\$835,991	101%	1,998	2,354	118%	0.20	1.00	503%	8,800	9,104	103%
2018	\$744,749	\$676,815	91%	1,997	2,563	128%	0.20	0.77	387%	8,798	9,013	102%



## **Home Energy House Call**

### Energy Assessments<sup>1</sup>

	Vintage 2019	Vintage 2019	% of
		YTD December 31,	
\$ in millions, rounded	As Filed	2019	Target
NPV of Avoided Cost	\$4.2	\$4.4	105%
Program Cost	\$3.0	\$3.2	107%
MW	1.0	0.9	91%
MWH	6,542.9	7,886.9	121%
Units	34,304	61,692	180%

- 1) Values are reflected at the system level.
- 2) Units represent number of measures, and do include additional LEDs.

2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	2,565	7,834	5,269
Savings (MW)	0.43	0.94	0.51
Participants		41,226	
2019 Program Expenses		\$2,109,106	

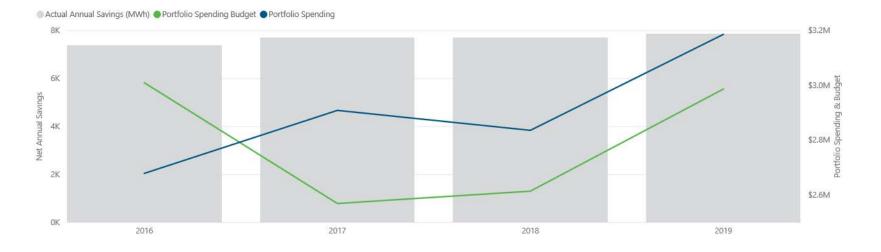
## **Home Energy House Call**

Measure	State	NC	SC
Audit	DEC	7,529	2,817
Additional Bulb		31,016	12,119
Bathroom Aerator		1,663	639
Pipewrap		4,887	1,062
Total		45,095	16,637
Audit	DEP	5,948	779
Additional Bulb		25,352	3,181
Bathroom Aerator		1,879	168
Pipewrap		3,213	706
Total		36,392	4,834

## **DEC Home Energy House Call**

#### Energy Assessments Program Budget, Savings & Number of Measures

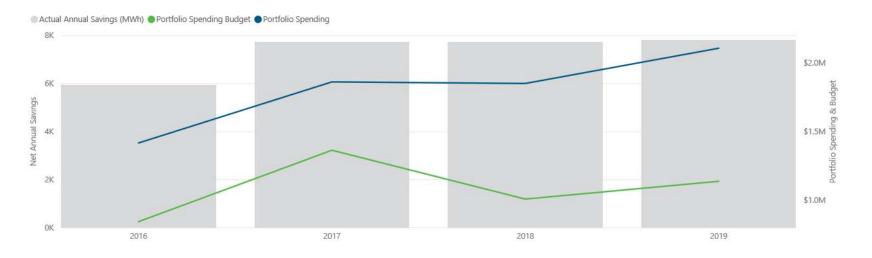
	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget -	Actual	%
2019	\$2,987,118	\$3,186,888	107%	6,543	7,887	121%	1.04	0.95	91%	34,304	61,692	180%
2018	\$2,613,893	\$2,836,229	109%	7,436	7,717	104%	1.14	0.93	81%	8,440	55,978	663%
2017	\$2,568,858	\$2,909,098	113%	7,923	7,721	97%	0.98	1.04	106%	8,038	52,546	654%
2016	\$3,010,149	\$2,678,893	89%	7,547	7,389	98%	0.93	1.07	114%	7,656	28,853	377%



## **DEP Home Energy House Call**

#### Residential Energy Assessments Program Budget, Savings & Number of Measures

	Expenditures			Energy Savings		Demand Savings			Participants			
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
rear												
2019	\$1,138,481	\$2,109,106	185%	2,565	7,834	305%	0.43	0.94	220%	13,672	41,226	302%
2017	\$1,365,004	\$1,863,486	137%	3,132	7,734	247%	0.52	0.93	178%	25,375	38,090	150%
2018	\$1,008,625	\$1,851,965	184%	2,720	7,752	285%	0.45	0.94	206%	22,036	37,923	172%
2016	\$843,942	\$1,417,924	168%	1,282	5,943	464%	0.21	0.72	334%	10,385	27,614	266%



# Save Energy and Water Kits\*\*

2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	30,940	16,709	-14,231
Savings (MW)	8.91	5.05	-3.87
Participants		253,098	
2019 Program Expenses		\$1,226,733	

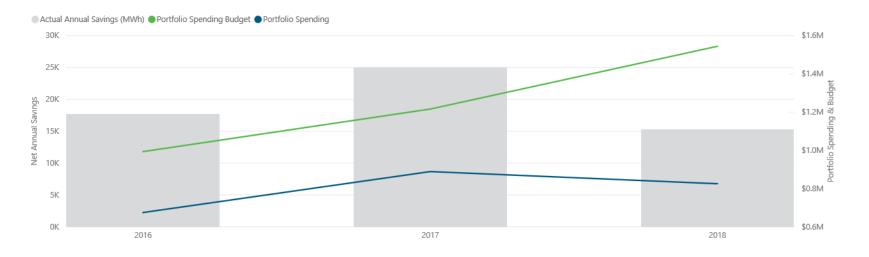
Save Energy a	and Water
Jurisdiction	Kits
DEC - NC	31,961
DEC - SC	11,075
DEP - NC	21,929
DEP - SC	3,814
Grand Total	68,779

### **DEP Save Energy and Water Kits**

#### Save Energy and Water Kit Program Budget, Savings & Number of Measures

	Λ.		
~			

	Expenditures			Expenditures Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget •	Actual	%
2017	\$1,216,177	\$888,869	73%	15,667	25,021	160%	1.25	8.38	668%	316,437	463,854	147%
2016	\$993,420	\$674,538	68%	12,758	17,672	139%	1.02	5.91	579%	257,688	325,146	126%
2018	\$1,544,762	\$825,279	53%	21,484	15,252	71%	1.72	5.06	294%	432,591	276,327	64%



### Free LEDs\*\*

- Offered in DEC as part of EE Appliances and Devices Program
- 451,000 orders for 5.6 million bulbs in 2019
- The Free LED program is scheduled to discontinue in Duke Energy Carolinas in 2020

Free LEDs (DEC Only)							
State	Participation (Bulbs)	Split					
NC	4,440,368	77%					
SC	1,361,532	23%					
Total	5,801,900	100%					

# **Programs with Participant Costs**

### **Energy Efficient Appliances and Devices**

Energy Efficient Appliances and Devices<sup>1</sup>

	Vintage 2019	Vintage 2019	% of
\$ in millions, rounded	As Filed	YTD December 31, 2019	Target
NPV of Avoided Cost	\$52.1	\$102.1	196%
Program Cost	\$21.7	\$41.4	190%
MW	16.7	31.8	190%
MWH	97,320.5	187,351.7	193%
Units	3,997,670	9,893,466	247%

<sup>1)</sup> Values are reflected at the system level.

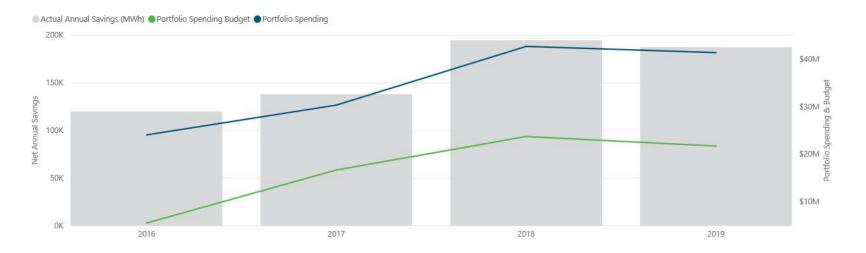
DEC NC	76%	DEP NC	93%
DEC SC	24%	DEP SC	7%

- For DEC, includes Free LEDs, SEWK, Retail Lighting, Specialty Lighting and Online Store
- 43,578 orders thru OLS for 331,095 bulbs; 11,724 smart thermostats; 3,553 smart strips; and 220 water measures, 639 LED fixtures
- Over 99 percent of customers accessed OLS via the public website, while 1 percent accessed OLS by logging into their OLS account.

### **DEC Energy Efficient Appliances and Devices**

#### Energy Efficient Appliances and Devices Program Budget, Savings & Number of Measures

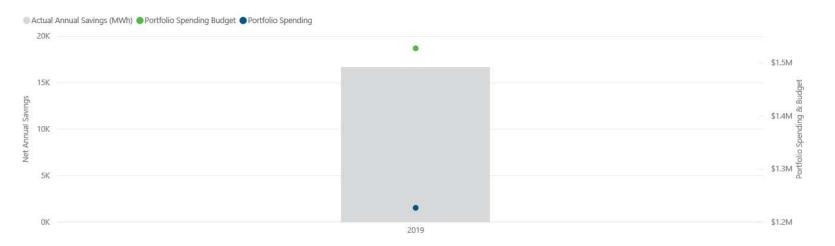
	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
Total I	£22.720.047	642 607 244	4000/	07.720	405.242	2000/	44.72	22.00	2000/	2 522 406		2000/
2018	\$23,729,947	\$42,687,244	180%	97,729	195,213	200%	11.73	32.80	280%	3,533,486	10,242,946	290%
2019	\$21,726,700	\$41,380,987	190%	97,321	187,352	193%	16.73	31.80	190%	3,997,670	9,893,466	247%
2017	\$16,694,730	\$30,340,728	182%	63,591	137,960	217%	8.14	24.61	302%	2,544,764	6,819,189	268%
2016	\$5,528,158	\$24,069,774	435%	36,348	120,226	331%	4.06	14.52	357%	955,750	3,868,812	405%



# **DEP Appliances and Devices**

#### Appliances and Devices Program Budget, Savings & Number of Measures

Exper	nditures		Ene	rgy Savings		Den	nand Savings		P	articipants	
Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
									1000		
\$1,527,511	\$1,226,733	80%	30,940	16,709	54%	8.91	5.05	57%	452,400	253,098	56%
			Budget Actual %	Budget Actual % Budget	Budget Actual % Budget Actual	Budget Actual % Budget Actual %	Budget Actual % Budget Actual % Budget	Budget Actual % Budget Actual % Budget Actual	Budget Actual % Budget Actual % Budget Actual %	Budget Actual % Budget Actual % Budget Actual % Budget	Budget Actual % Budget Actual % Budget Actual % Budget Actual   ▼



## **Retail Lighting**

2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	31,505	37,390	5,886
Savings (MW)	5.81	6.16	0.35
Participants		2,650,367	
2019 Program Expenses		\$13,417,185	

- DEC Retail Lighting is included in EE Appliances and Devices Program.
- DEP had 17 lighting retail channels actively participating --the top 5 retail channels account for 78% of the sales
- DEC had 8 lighting retail channels actively participating --the top 3 retail channels account for 70% of the sales

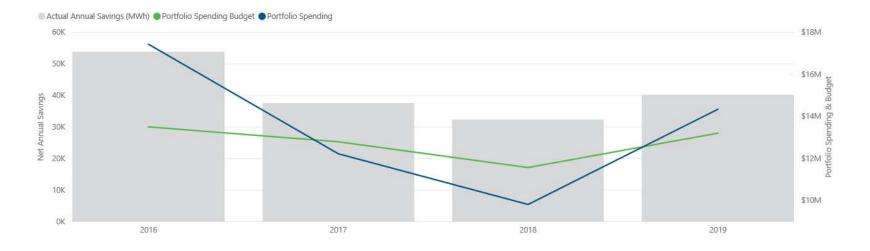
Retail Lighting Program (DEC)						
State	Participation (Bulbs)	Split				
DEC (NC)	2,683,079	77%				
DEC (SC)	793,363	23%				
Total	3,476,442	100%				

Retail Lighting Program (DEP)					
State	Participation (Bulbs)	Split			
DEP (NC)	2,281,045	86%			
DEP (SC)	369,322	14%			
Total	2,650,367	100%			

# **DEP Retail Lighting**

#### Energy Efficient Lighting Program Budget, Savings & Number of Measures

	Exper	nditures		Ene	ergy Savings		Den	nand Savings		P	articipants	
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
	4.2 500.000	A. 7	10001		50.000	700	44.00		700/	2524.000	3	40.00
2016	\$13,508,880	\$17,441,878	129%	68,441	53,830	79%	11.23	8.82	79%	2,501,909	3,244,448	130%
2019	\$13,209,118	\$14,346,463	109%	31,505	40,249	128%	5.81	6.59	113%	1,945,783	2,754,133	142%
2017	\$12,799,466	\$12,229,222	96%	63,371	37,551	59%	10.40	6.82	66%	2,251,730	2,520,381	112%
2018	\$11,573,219	\$9,815,496	85%	29,251	32,403	111%	4.92	5.98	121%	1,868,674	2,147,254	115%



# **Smart \$aver Residential**

Residential - Smart \$aver Energy Efficiency Program<sup>1</sup>

	Vintage 2019	Vintage 2019	% of
\$ in millions, rounded	As Filed	YTD December 31, 2019	Target
NPV of Avoided Cost	\$4.5	\$7.1	157%
Program Cost	\$4.8	\$7.4	154%
MW	1.3	2.0	157%
MWH	5,130.7	7,329.1	143%
Units	9,630	25,852	268%

<sup>1)</sup> Values are reflected at the system level.

2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	4,184	6,756	2,572
Savings (MW)	1.11	1.86	0.75
Participants		21,965	
2019 Program Expenses		\$6,397,527	

## **Smart \$aver Residential**

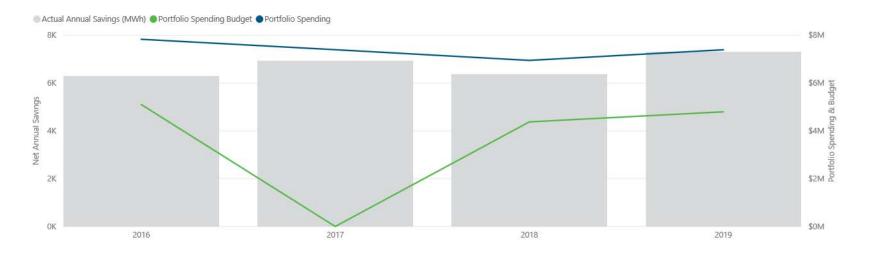
The Referral Channel generated over 15,668 customer referrals during 2019 with a 95% customer satisfaction rating

1	NC	SC		
DEC	DEP	DEC	DEP	
22,645	21,209	3,979	790	
46%	44%	8%	2%	
	al NC ,854	Tota 4,7	II SC 769	

# **DEC Smart \$aver HVAC**

#### HVAC Energy Efficiency Program Budget, Savings & Number of Measures

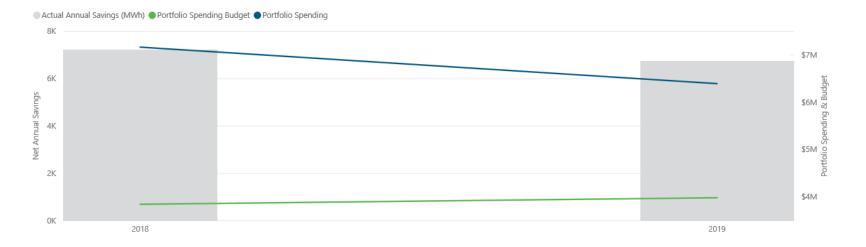
	Expe	nditures		Ene	rgy Savings		Den	nand Savings		P	articipants	
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2017	\$0	\$7,403,327	0%	0	6,955	0%	0.00	1.85	0%	0	27,311	0%
2019	\$4,802,289	\$7,400,669	154%	5,131	7,329	143%	1.29	2,03	157%	9,630	25,852	268%
2018	\$4,379,521	\$6,955,146	159%	5,360	6,367	119%	1.58	1.64	104%	9,480	25,293	267%
2016	\$5,107,181	\$7,839,566	154%	3,365	6,295	187%	1.53	2,46	161%	9,986	19,475	195%



## **DEP Smart \$aver**

#### Residential Smart\$aver Program Budget, Savings & Number of Measures

	Exper	nditures		Ene	rgy Savings		Der	nand Savings		Pa	articipants	
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget 🔻	Actual	%
2018	\$3,847,421	\$7,168,833	186%	3,134	7,229	231%	1.14	1.80	158%	9,260	24,562	265%
2019	\$3,985,069	\$6,397,527	161%	4,184	6,756	161%	1.11	1.86	168%	8,147	21,965	270%



## **Residential New Construction**

2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	16,447	16,337	-109
Savings (MW)	7.10	4.66	-2.44
Participants		13,165,685	
2019 Program Expenses		\$15,080,405	

Total, 580 builders and 28 approved raters registered

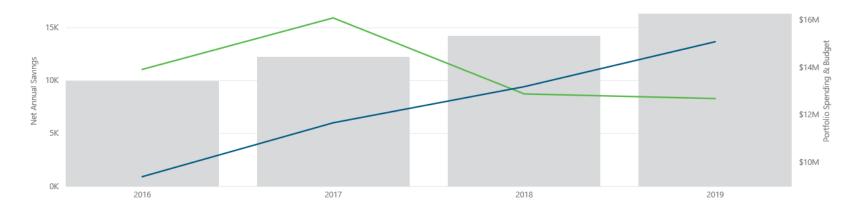
Measure Qty			
	DEP (NC)	DEP (SC)	Grand Total
2019	5941	2	5943

## **DEP Residential New Construction**

#### Residential New Construction Program Budget, Savings & Number of Measures

	Expenditures		Energy Savings			Demand Savings			Participants			
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget 🔻	Actual	%
2019	\$12,691,351	\$15,080,405	119%	16,447	16,337	99%	7.10	4.66	66%	11,891,674	13,165,685	111%
2018	\$12,886,524	\$13,189,949	102%	16,048	14,263	89%	6.95	5.44	78%	11,341,393	11,275,657	99%
2017	\$16,082,178	\$11,671,724	73%	10,075	12,246	122%	4.36	5.27	121%	4,750	9,732,077	204886 %
2016	\$13,917,269	\$9,405,615	68%	8,955	9,955	111%	3.87	4.36	113%	4,500	5,700,623	126681
												%

Actual Annual Savings (MWh) Portfolio Spending Budget Portfolio Spending



# **Demand Response**

## **Energy Wise Home**

2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	N/A	N/A	N/A
Savings (MW)	418.15	422.12	3.97
Participants		422.12	
2019 Program Expenses		\$14,607,732	

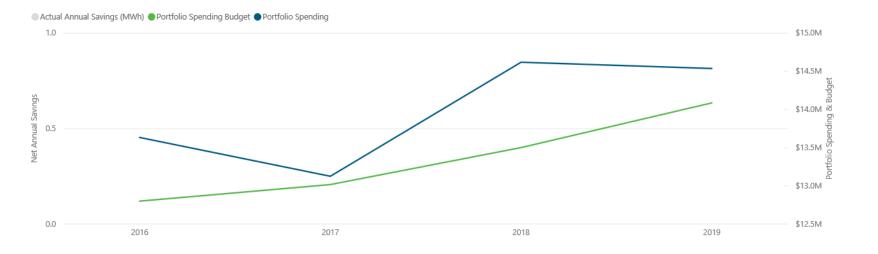
MW Savings at the meter include Summer MW for AC participants and Winter MW for Heat Strip and Water Heater Participants

- 182,000 participants and full shed load impacts of 376 MW summer and
   14.5 MW winter at the meter
- Bring Your Own Thermostat Program launched in mid-December—
  - DEC ~3,700 Customers, 5,400 devices
  - DEP ~2,900 Customers, 4,300 devices

# **DEP EnergyWise Home**

#### **EnergyWise Program Budget, Savings & Number of Measures**

	Expe	nditures		Ene	ergy Savings		Der	mand Savings		P	articipants 🖈	76.
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2017	\$13,016,514	\$13,125,314	101%	0	0	0%	22.04	33.43	152%	11,066	20,506	185%
2016	\$12,799,495	\$13,633,666	107%	0	0	0%	22.81	34.06	149%	11,433	18,465	162%
2019	\$14,086,536	\$14,537,464	103%	0	0	0%	27.12	31.09	115%	14,820	15,978	108%
2018	\$13,501,070	\$14,619,512	108%	0	0	0%	29.08	29.48	101%	14,985	15,602	104%



## **Power Manager**

PowerManager<sup>1</sup>

	Vintage 2019	Vintage 2019	% of
\$ in millions, rounded	As Filed	YTD December 31, 2019	Target
NPV of Avoided Cost	\$60.8	\$69.8	115%
Program Cost	\$14.1	\$13.4	95%
MW <sup>2</sup>	534.4	568.2	106%
MWH	0.0	N/A	-
Units <sup>3</sup>	503,131	535,704	106%

#### Notes on Tables:

1) Values are reflected at the system level.

- At year-end, there were
  - 238,057 customers--NC: 180,513 and SC: 57,544
  - 286,473 air conditioners--NC: 216,490 and SC: 69,983

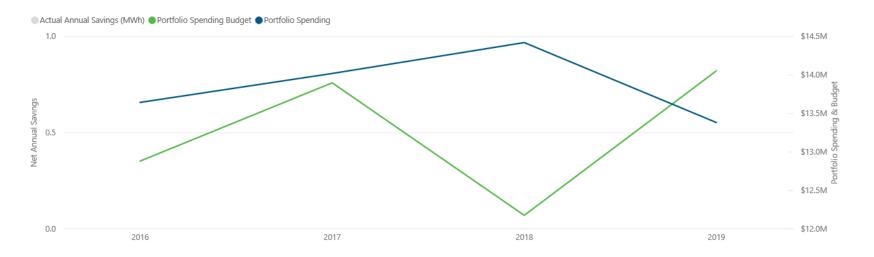
State & Type	
NC - CAN	216,490
SC - CAN	69,983
DEC - CAN	286,473
NC - Customers	180,513
SC - Customers	57,544
DEC - Customers	238,057

• net increases of 8,682 customers (+3.8%) and 10,794 air conditioners (+3.9%).

# **DEC Power Manager**

#### PowerManager Program Budget, Savings & Number of Measures

	Exper	nditures		Ene	ergy Savings		Der	nand Savings		Pa	articipants	
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2010	\$44.0FF.F7F	642 202 620	050/	2		00/	524.42	560.24	4000	F02.424	F24067	1000
2019	\$14,055,575	\$13,383,639	95%	0	0	0%	534.42	568.24	106%	503,131	534,967	106%
2018	\$12,175,733	\$14,423,610	118%	0	0	0%	503.30	533.51	106%	473,837	502,271	106%
2017	\$13,899,748	\$14,021,500	101%	0	0	0%	502.97	501.12	100%	473,525	471,780	100%
2016	\$12,881,566	\$13,644,970	106%	0	0	0%	504.19	455.39	90%	474,675	428,731	90%



## ISOP Coordination with Carolinas Collaborative March 19, 2020













BUILDING A SMARTER ENERGY FUTURESM

## ISOP & Carolinas Collaborative partnership opportunity



The Ask: Can the Collaborative help ISOP to assess potential of EE and Customer Programs to be used as non-traditional solutions?

- Current regulatory treatment and policies are not designed to recognize localized EE/Customer Program benefits (or costs)
- Can we leverage Collaborative to gather feedback and address opportunities to improve EE/Customer Program analysis and rate design?
- Development of "Use Cases" is an effective way to identify and address barriers

## Timeline of Strategic Carolinas Stakeholder Activities



The path forward for the Carolinas' energy future will continue to evolve iteratively through dialogues with diverse stakeholders, and state-mandated clean energy requirements.

Commitments

Duke Energy's 2020 Carolinas IRP will reflect the company's updated climate goals.

Future IRPs will continue to evolve, reflecting changes in market dynamics and state policies, including any next steps from NC's Clean Energy Plan and SC's Act 62.

Duke Energy's goal is to implement the basic elements of ISOP in the 2022 Carolinas IRP.

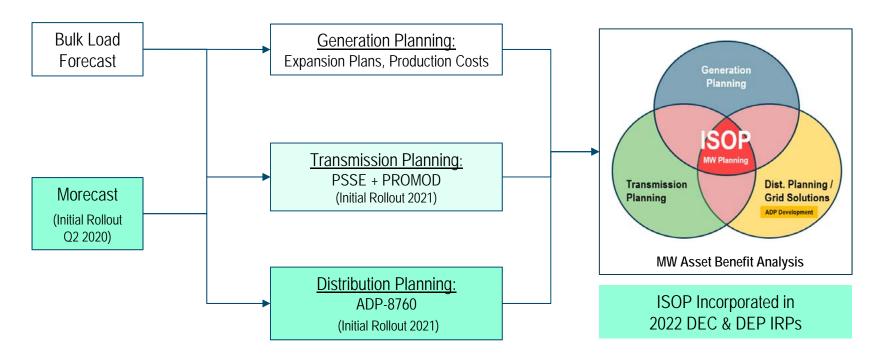
Initiative	Q4 2019	Q1 2020	Q2 2020	Q3 2020	Q4 2020	2021	2022			
Integrated Resource Plan		2020 IRP	Forums epare & Submit 2020 F	Full IRP 9/1		IRP Update	Full IRP with Basic ISOP Elements*			
NC Clean Energy Plan Rec. A-1**	DEQ Stakehold	ler Working Group								
Integrated System	Workshop #1	Webinars 1 & 2	Workshop #2/Final Report							
& Operations Planning	Stakeholder Engagement  Develop and Refine ISOP Tools and Processes									
In-Progress Not St	arted									

\*Goal

<sup>\*\*</sup>A-1 directs NC DEQ to develop a report on potential carbon reduction policies.

## ISOP Development Timeline





Stakeholders are invited to visit the Reference Information Portal to learn more about the ISOP vision (https://www.duke-energy.com/isop)



# Non-traditional Solution Evaluations

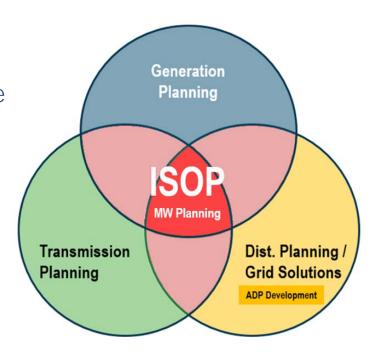
The initial screening phase ...

## ISOP Development for Non-Traditional Solutions Evaluations



- ISOP is developing new tools, processes and methodologies to screen for and evaluate non-traditional solutions.
- Simulations and case studies are being used to refine the new processes and help identify gaps in approach.
- This iterative development approach is focused on integrating these new processes into the 2022 Carolinas Integrated Resource Plans.
- Today's discussion will focus on high-level screening processes which help identify NTS candidates for more detailed analysis and review.
- The information provided in this presentation reflects
   work in progress and will change as development
   progresses.

  Duke Energy PROPRIETARY Use Pursuant to Company



#### **Traditional Solutions**



Historically, growth in customer demand for electricity was solved through traditional infrastructure investments. These investments include:

- Generating stations for system capacity or energy needs
- Transmission or distribution lines, substations, and associated equipment to address issues on the transmission system or overloads on distribution circuits
- Additional feeders or small generators to address reliability for critical or remote circuits with a high outage history







## Non-Traditional Solutions (NTS)



Non-traditional solutions (NTS) are alternative methods of solving utility system issues which would typically be addressed with traditional infrastructure investments

Non-traditional solutions may also be referred to as non-wires alternatives (NWAs)

#### NTS/NWAs can include:

- Demand Response/Load Management (DR)
- Distributed Generation (DG)
- Energy Efficiency (EE)
- Electrical Storage Systems (ESS Batteries)
- Pumped Storage and Thermal Storage Systems
- Rate Design









#### Non-Traditional Solution Evaluations



Screening is the first cut in a complex planning process to help identify alternatives for further review.

Some of the building blocks for NTS economic and technical potential screening assessments:

- Establish forecasts for system load and energy delivery requirements
  - Morecast, traditional circuit level and bulk system forecasts
- Characterize traditional and non-traditional solutions to enable comparison of alternatives
  - Technology characterization studies provide cost and performance attributes for use in planning
- Estimate values for bulk system services to support G, T and D planners
  - Proxy values for system capacity services and energy arbitrage potential
  - Proxy values for system support services including reserves and ancillary services
- Characterize additional potential value for deferral of traditional T or D investments

Each of these steps involves new processes and tools that are being developed as part of ISOP

### Non-Traditional Solution Evaluations

High-level NTS Screening



Annual Long-Term Bulk
System Generation
Planning

Integrated Resource Plan
(IRP) for Bulk System

Sop collaboration with
G,T&D planning

Investment Plans

Needs Assessments:
Bulk System Capacity & Energy
Grid Needs Assessment

Identify Traditional Utility
Solutions

Evaluate technical and economic suitability of Non-Traditional Solutions

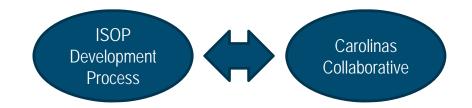
The process depicted focuses on the initial screening phase for traditional and non-traditional solutions

#### Q&A



## **Discussion questions**

- Is there a practical way for ISOP to engage with the Collaborative?
- What are the practical limitations for counting on EE/Customer Programs to defer Distribution and Transmission investments?
- Which use cases are you most interested in / are most important to you?





#### BUILDING A **SMARTER** ENERGY FUTURE<sup>SM</sup>

Duke Energy PROPRIETARY - Use Pursuant to Company Instructions



**Non-Residential Program Updates** 



# **Prescriptive Programs**

# **Small Business Energy Saver**

Small Business Energy Saver<sup>1</sup>

	Vintage 2019	Vintage 2019	% of
<i>\$ in millions, rounded</i>	As Filed	YTD December 31, 2019	Target
NPV of Avoided Cost	\$37.9	\$25.7	68%
Program Cost	\$14.6	\$11.4	78%
MW	14.5	9.2	63%
MWH	75,258.1	53,674.2	71%
Units <sup>2</sup>	61,700,000	51,421,356	83%

<sup>1)</sup> Values are reflected at the system level.

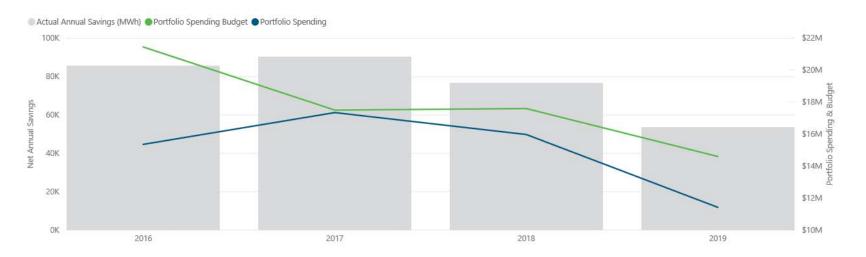
<sup>2)</sup> Units reflect gross kWh.

2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	46,011	34,745	-11,266
Savings (MW)	8.95	5.82	-3.13
Participants		33,301,332	
2019 Program Expenses		\$7,346,426	

# **DEC Small Business Energy Saver**

#### Small Business Energy Saver Program Budget, Savings & Number of Measures

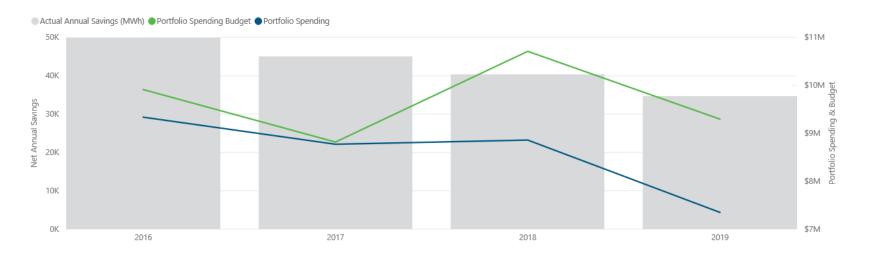
	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2017	\$17,505,451	\$17,350,972	99%	61,629	90,297	147%	12.84	17.26	134%	65,000,000	79,986,749	123%
2018	\$17,602,867	\$15,977,993	91%	93,136	76,697	82%	17.12	13.37	78%	75,800,000	73,493,029	97%
2016	\$21,459,213	\$15,360,852	72%	68,899	85,688	124%	16.60	16.11	97%	72,805,295	70,239,423	96%
2019	\$14,602,066	\$11,418,264	78%	75,258	53,674	71%	14.50	9.20	63%	61,700,000	51,421,356	83%



# **DEP Small Business Energy Saver**

#### Small Business Energy Saver Program Budget, Savings & Number of Measures

	Exper	nditures		Ene	rgy Savings		Den	nand Savings		Pa	rticipants	
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget •	Actual	%
2016	\$9,913,059	\$9,336,274	94%	39,581	49,979	126%	7.55	8.67	115%	40,500,000	42,784,494	106%
2017	\$8,816,714	\$8,770,755	99%	35,281	45,011	128%	6.73	8.50	126%	36,100,000	40,204,550	111%
2018	\$10,712,026	\$8,858,213	83%	53,576	40,298	75%	9.94	6.67	67%	44,500,000	38,604,480	87%
2019	\$9,294,966	\$7,346,426	79%	46,011	34,745	76%	8.95	5.82	65%	38,500,000	33,301,332	86%



# **Smart \$aver Prescriptive**

Non Residential Smart Saver Prescriptive<sup>1</sup>

	Vintage 2019	Vintage 2019	% of
\$ in millions, rounded	As Filed	YTD December 31, 2019	Target
NPV of Avoided Cost	\$84.3	\$103.6	123%
Program Cost	\$27.8	\$23.7	85%
MW	23.6	30.0	127%
MWH	160,730.5	158,072.3	98%
Units	14,784,792	8,510,436	58%

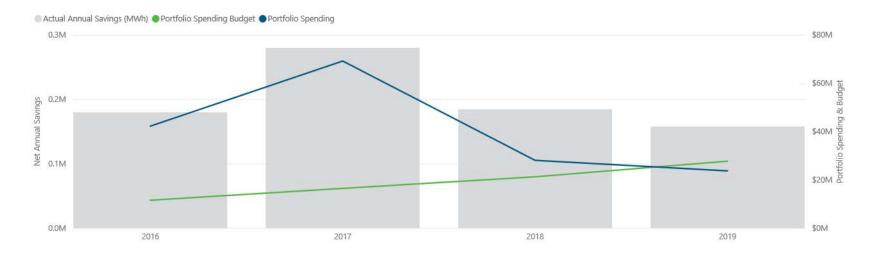
<sup>1)</sup> Values are reflected at the system level.

2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	48,474	55,043	6,569
Savings (MW)	7.34	10	2.87
Participants		1,685,457	
2019 Program Expenses		\$7,948,870	

# **DEC Smart \$aver Prescriptive**

#### All Program Budget, Savings & Number of Measures

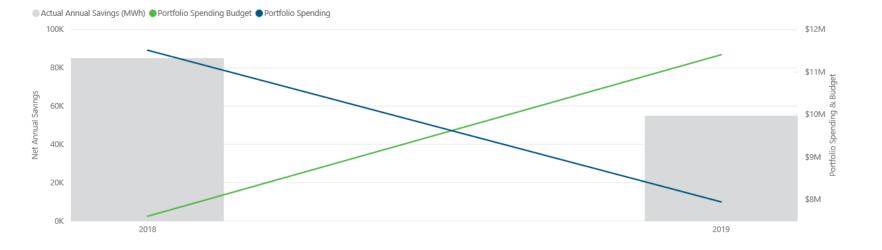
Ехреі	nditures		Ene	rgy Savings		Den	mand Savings		P	articipants	
Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
\$27,756,994	\$23,730,040	85%	160,731	158,072	98%	23.64	29.97	127%	14,784,792	8,510,436	58%
\$16,484,450	\$69,309,592	420%	87,299	280,372	321%	15.25	49.11	322%	381,368	5,323,913	1396%
\$11,553,041	\$42,304,359	366%	105,657	179,738	170%	18.01	30.96	172%	2,165,635	5,159,447	238%
\$21,277,469	\$28,110,902	132%	103,721	184,840	178%	14.90	33.00	222%	19,681,171	5,050,134	26%
	\$27,756,994 \$16,484,450 \$11,553,041	\$27,756,994 \$23,730,040 \$16,484,450 \$69,309,592 \$11,553,041 \$42,304,359	Budget         Actual         %           \$27,756,994         \$23,730,040         85%           \$16,484,450         \$69,309,592         420%           \$11,553,041         \$42,304,359         366%	Budget         Actual         %         Budget           \$27,756,994         \$23,730,040         85%         160,731           \$16,484,450         \$69,309,592         420%         87,299           \$11,553,041         \$42,304,359         366%         105,657	Budget         Actual         %         Budget         Actual           \$27,756,994         \$23,730,040         85%         160,731         158,072           \$16,484,450         \$69,309,592         420%         87,299         280,372           \$11,553,041         \$42,304,359         366%         105,657         179,738	Budget         Actual         %         Budget         Actual         %           \$27,756,994         \$23,730,040         85%         160,731         158,072         98%           \$16,484,450         \$69,309,592         420%         87,299         280,372         321%           \$11,553,041         \$42,304,359         366%         105,657         179,738         170%	Budget         Actual         %         Budget         Actual         %         Budget           \$27,756,994         \$23,730,040         85%         160,731         158,072         98%         23.64           \$16,484,450         \$69,309,592         420%         87,299         280,372         321%         15.25           \$11,553,041         \$42,304,359         366%         105,657         179,738         170%         18.01	Budget         Actual         %         Budget         Actual         %         Budget         Actual           \$27,756,994         \$23,730,040         85%         160,731         158,072         98%         23.64         29.97           \$16,484,450         \$69,309,592         420%         87,299         280,372         321%         15.25         49.11           \$11,553,041         \$42,304,359         366%         105,657         179,738         170%         18.01         30.96	Budget         Actual         %         Budget         Actual         %         Budget         Actual         %           \$27,756,994         \$23,730,040         85%         160,731         158,072         98%         23.64         29.97         127%           \$16,484,450         \$69,309,592         420%         87,299         280,372         321%         15.25         49.11         322%           \$11,553,041         \$42,304,359         366%         105,657         179,738         170%         18.01         30.96         172%	Budget         Actual         %         Budget         Actual         %         Budget         Actual         %         Budget         Actual         %         Budget           \$27,756,994         \$23,730,040         85%         160,731         158,072         98%         23.64         29.97         127%         14,784,792           \$16,484,450         \$69,309,592         420%         87,299         280,372         321%         15.25         49.11         322%         381,368           \$11,553,041         \$42,304,359         366%         105,657         179,738         170%         18.01         30.96         172%         2,165,635	Budget Actual %  \$27,756,994 \$23,730,040 85% 160,731 158,072 98% 23.64 29.97 127% 14,784,792 8,510,436 \$16,484,450 \$69,309,592 420% 87,299 280,372 321% 15.25 49.11 322% 381,368 5,323,913 \$11,553,041 \$42,304,359 366% 105,657 179,738 170% 18.01 30.96 172% 2,165,635 5,159,447



# **DEP Smart \$aver Prescriptive**

#### Non-Residential Smart\$aver Prescriptive Program Budget, Savings & Number of Measures

	Expenditures			Energy Savings			Demand Savings			Participants ☆ ▽ ゼ …		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
rear	▼											
2019	\$11,408,405	\$7,948,870	70%	48,474	55,043	114%	7.34	10.21	139%	889,128	1,685,457	190%
2018	\$7,610,009	\$11,515,913	151%	29,919	85,112	284%	3.15	14.78	470%	2,927,380	1,098,692	38%



# **Custom Programs**

# **Smart \$aver Custom**

#### Non Residential Smart Saver Custom<sup>1</sup>

	Vintage 2019	Vintage 2019	% of	
\$ in millions, rounded	As Filed	YTD December 31, 2019	Target	
NPV of Avoided Cost	\$24.1	\$35.9	149%	
Program Cost	\$10.1	\$8.9	88%	
MW	6.9	10.1	146%	
MWH	60,678.5	52,522.6	87%	
Units	48,280	34,709	72%	

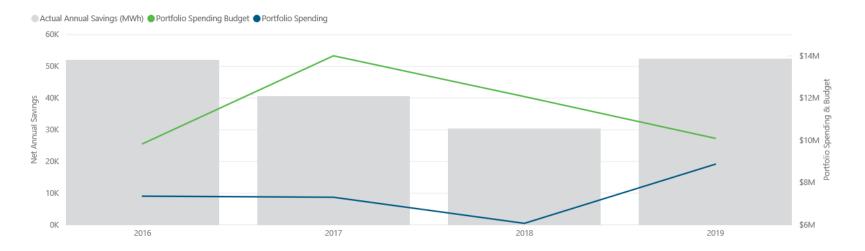
<sup>1)</sup> Values are reflected at the system level.

2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	13,879	13,130	-749
Savings (MW)	1.58	3.12	1.54
Participants		10,996	
2019 Program Expenses		\$2,769,305	

# **DEC Smart \$aver Custom**

### Non Residential Smart Saver Custom Program Budget, Savings & Number of Measures

	Expenditures			Ene	rgy Savings		Demand Savings			Pa	Participants			
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget 🔻	Actual	%		
2017	\$14,005,768	\$7,304,838	52%	90,102	40,610	45%	10.29	6.01	58%	73,002	40,134	55%		
2019	\$10,095,189	\$8,871,440	88%	60,679	52,523	87%	6.93	10.11	146%	48,280	34,709	72%		
2016	\$9,835,671	\$7,356,509	75%	78,437	52,155	66%	8.95	7.93	89%	63,551	34,098	54%		
2018	\$12,072,548	\$6,068,902	50%	95,316	30,333	32%	10.88	4.05	37%	62,136	23,345	38%		

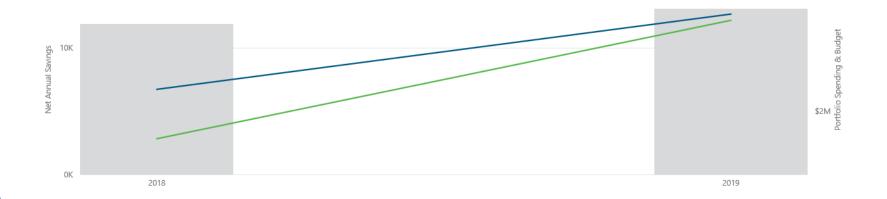


# **DEP Smart \$aver Custom**

### Non-Residential Smart\$aver Custom Program Budget, Savings & Number of Measures

	Expenditures			Energy Savings			Demand Savings			Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget -	Actual	%
2018	\$1,783,447	\$2,174,163	122%	11,484	11,901	104%	1.31	1.88	144%	8,760	11,338	129%
2019	\$2,719,960	\$2,769,305	102%	13,879	13,130	95%	1.58	3.12	197%	10,308	10,996	107%

■ Actual Annual Savings (MWh) ■ Portfolio Spending Budget ■ Portfolio Spending



\$3M

# **Custom Assessments**

Non Residential Smart Saver Custom Technical Assessments<sup>1</sup>

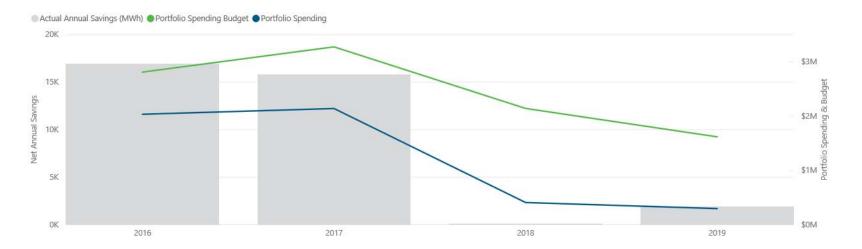
	Vintage 2019	Vintage 2019	% of
\$ in millions, rounded	As Filed	YTD December 31, 2019	Target
NPV of Avoided Cost	\$3.5	\$0.7	20%
Program Cost	\$1.6	\$0.3	18%
MW	1.0	0.1	15%
MWH	8,831.6	1,930.8	22%
Units	6,125	4	0%

<sup>1)</sup> Values are reflected at the system level.

# **DEC Custom Assessments**

### Non Residential Smart Saver Custom Technical Assessments Program Budget, Savings & Number of Measures

Expenditures			Energy Savings			Den	Demand Savings			Participants		
Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	
\$2,141,618	\$407,293	19%	20,322	84	0%	2.32	0.01	1%	13,248	218	2%	
\$2,811,494	\$2,034,308	72%	17,529	16,953	97%	2.00	1.58	79%	14,202	199	1%	
\$3,276,235	\$2,139,875	65%	13,281	15,792	119%	1.52	1.63	107%	10,760	9	0%	
\$1,618,240	\$295,925	18%	8.832	1,931	22%	1.01	0.15	15%	6.125	4	0%	
	\$2,141,618 \$2,811,494 \$3,276,235	\$2,141,618 \$407,293 \$2,811,494 \$2,034,308 \$3,276,235 \$2,139,875	Budget         Actual         %           \$2,141,618         \$407,293         19%           \$2,811,494         \$2,034,308         72%           \$3,276,235         \$2,139,875         65%	Budget         Actual         %         Budget           \$2,141,618         \$407,293         19%         20,322           \$2,811,494         \$2,034,308         72%         17,529           \$3,276,235         \$2,139,875         65%         13,281	Budget         Actual         %         Budget         Actual           \$2,141,618         \$407,293         19%         20,322         84           \$2,811,494         \$2,034,308         72%         17,529         16,953           \$3,276,235         \$2,139,875         65%         13,281         15,792	Budget         Actual         %         Budget         Actual         %           \$2,141,618         \$407,293         19%         20,322         84         0%           \$2,811,494         \$2,034,308         72%         17,529         16,953         97%           \$3,276,235         \$2,139,875         65%         13,281         15,792         119%	Budget         Actual         %         Budget         Actual         %         Budget           \$2,141,618         \$407,293         19%         20,322         84         0%         2.32           \$2,811,494         \$2,034,308         72%         17,529         16,953         97%         2.00           \$3,276,235         \$2,139,875         65%         13,281         15,792         119%         1.52	Budget         Actual         %         Budget         Actual         %         Budget         Actual           \$2,141,618         \$407,293         19%         20,322         84         0%         2.32         0.01           \$2,811,494         \$2,034,308         72%         17,529         16,953         97%         2.00         1.58           \$3,276,235         \$2,139,875         65%         13,281         15,792         119%         1.52         1.63	Budget         Actual         %         Budget         Actual         %         Budget         Actual         %           \$2,141,618         \$407,293         19%         20,322         84         0%         2.32         0.01         1%           \$2,811,494         \$2,034,308         72%         17,529         16,953         97%         2.00         1.58         79%           \$3,276,235         \$2,139,875         65%         13,281         15,792         119%         1.52         1.63         107%	Budget         Actual         %         Budget         Actual         %         Budget         Actual         %         Budget         Actual         %         Budget           \$2,141,618         \$407,293         19%         20,322         84         0%         2.32         0.01         1%         13,248           \$2,811,494         \$2,034,308         72%         17,529         16,953         97%         2.00         1.58         79%         14,202           \$3,276,235         \$2,139,875         65%         13,281         15,792         119%         1.52         1.63         107%         10,760	Budget         Actual         %         Budget	



# **Performance Incentive**

### Non Residential Smart Saver Performance Incentive 1

	Vintage 2019	Vintage 2019	% of
\$ in millions, rounded	As Filed	YTD December 31, 2019	Target
NPV of Avoided Cost	\$8.5	\$2.2	26%
Program Cost	\$3.2	\$0.8	25%
MW	2.5	0.4	16%
MWH	21,489.5	4,546.0	21%
Units	23,254,911	19	0%

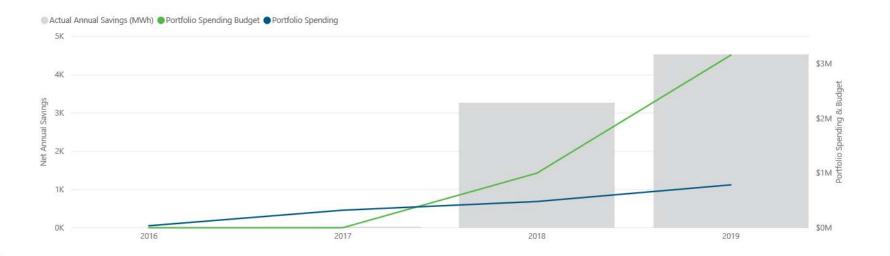
<sup>1)</sup> Values are reflected at the system level.

2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	6,577	1,357	-5,220
Savings (MW)	0.75	0.10	-0.65
Participants		62	
2019 Program Expenses		\$269,460	

# **DEC Performance Incentive**

### Non Residential Smart Saver Performance Incentive Program Budget, Savings & Number of Measures

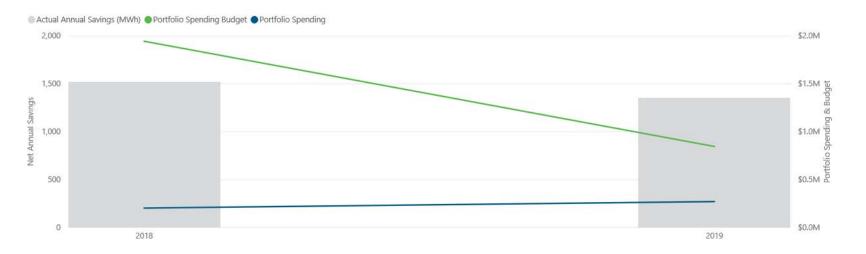
	Ехрег	nditures		Ene	Energy Savings Demand Savings					Participants			
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	
2018	\$998,804	\$479,610	48%	5,706	3,271	57%	0.65	0.17	26%	6,174,765	118	0%	
2017	\$0	\$320,559	0%	0	12	0%	0.00	0.00	0%	0	19	0%	
2019	\$3,162,160	\$784,949	25%	21,489	4,546	21%	2.45	0.39	16%	23,254,911	19	0%	
2016	\$0	¢25 670	0.0%	0	٥	0.0%	0.00	0.00	00/	0	0	0.94	



### **DEP Performance Incentive**

### Non-Residential Smart\$aver Performance Program Budget, Savings & Number of Measures

	Expenditures			Energy Savings			Demand Savings			Pi	Participants		
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	
2019	\$845,910	\$269,460	32%	6,577	1,357	21%	0.75	0.10	13%	6,320,736	62	0%	
2018	\$1,945,905	\$201,559	10%	1,729	1,519	88%	0.20	0.13	65%	1,662,148	37	0%	
2018	\$1,945,905	\$201,559	10%	1,729	1,519	88%	0.20	0.13	65%	1,662,148	3	7	



# **Demand Response**

# **EnergyWise Business**

### EnergyWise for Business1

	Vintage 2019	Vintage 2019	% of
\$ in millions, rounded	As Filed <sup>3</sup>	YTD December 31, 2019	Target
NPV of Avoided Cost	\$3.3	\$2.7	83%
Program Cost	\$4.0	\$3.7	93%
MW	16.7	11.6	70%
MWH	2,885.9	2,704.1	94%
Units <sup>2</sup>	19,023	15,053	79%

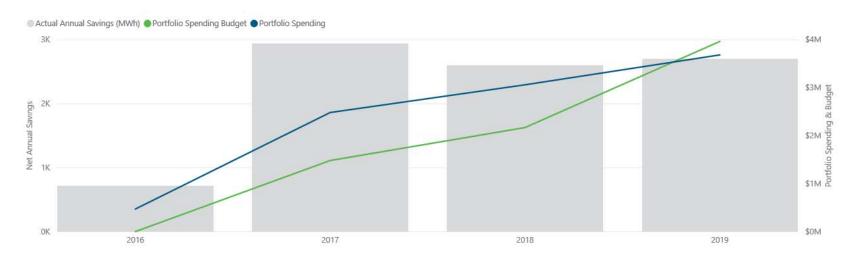
- 1) Values are reflected at the system level.
- 2) Units represent average monthly kW at meter for demand response measures (10,071), plus individual participants for smart thermostat energy efficiency measures (4,982).

2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	1,537	55.15	-1,481
Savings (MW)	8.89	4.79	-4.09
Participants (EE & DR)		7,460	
2019 Program Expenses		\$2,382,632	

# **DEC Energy Wise Business**

### EnergyWise for Business Program Budget, Savings & Number of Measures

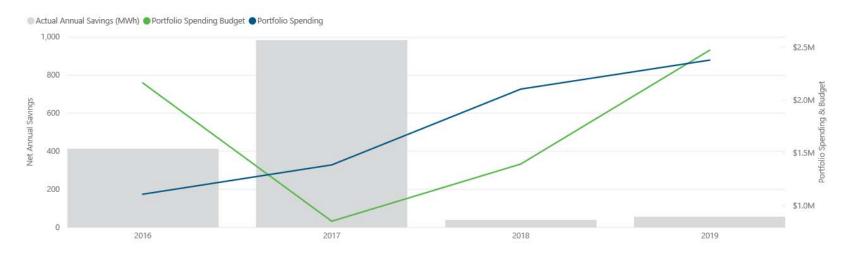
Program Year	Expenditures			Ene	Energy Savings			nand Savings		Participants		
	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2019	\$3,967,504	\$3,686,451	93%	2,886	2,704	94%	16.66	11.60	70%	19,023	15.053	79%
2018	\$2,170,686	\$3,062,816	141%	3,530	2,600	74%	17.03	8.00	47%	6,863	11,505	168%
2017	\$1,482,746	\$2,484,618	168%	1,757	2,944	168%	8.97	5.45	61%	3,342	8,537	255%
2016	\$0	\$470,304	0%	0	719	0%	0.00	1.20	0%	0	1,960	0%



# **DEP EnergyWise for Business**

### EnergyWise for Business Program Budget, Savings & Number of Measures

Expenditures			Ene	rgy Savings		Demand Savings			Participants ☆ ▽ 🖸		
Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
\$2,476,808	\$2,382,632	96%	1,537	55	4%	8.89	4.79	54%	6,750	7,460	111%
\$1,398,553	\$2,108,030	151%	2,158	38	2%	10.54	2.66	25%	2,838	2,017	71%
\$857,190	\$1,390,549	162%	986	984	100%	5.04	2.89	57%	1,896	1,664	88%
\$2,166,386	\$1,112,815	51%	649	412	64%	1.55	0.52	34%	781	697	89%
	\$2,476,808 \$1,398,553 \$857,190	Budget         Actual           \$2,476,808         \$2,382,632           \$1,398,553         \$2,108,030           \$857,190         \$1,390,549	Budget         Actual         %           \$2,476,808         \$2,382,632         96%           \$1,398,553         \$2,108,030         151%           \$857,190         \$1,390,549         162%	Budget         Actual         %         Budget           \$2,476,808         \$2,382,632         96%         1,537           \$1,398,553         \$2,108,030         151%         2,158           \$857,190         \$1,390,549         162%         986	Budget         Actual         %         Budget         Actual           \$2,476,808         \$2,382,632         96%         1,537         55           \$1,398,553         \$2,108,030         151%         2,158         38           \$857,190         \$1,390,549         162%         986         984	Budget         Actual         %         Budget         Actual         %           \$2,476,808         \$2,382,632         96%         1,537         55         4%           \$1,398,553         \$2,108,030         151%         2,158         38         2%           \$857,190         \$1,390,549         162%         986         984         100%	Budget         Actual         %         Budget         Actual         %         Budget           \$2,476,808         \$2,382,632         96%         1,537         55         4%         8.89           \$1,398,553         \$2,108,030         151%         2,158         38         2%         10.54           \$857,190         \$1,390,549         162%         986         984         100%         5.04	Budget         Actual         %         Budget         Actual         %         Budget         Actual           \$2,476,808         \$2,382,632         96%         1,537         55         4%         8.89         4.79           \$1,398,553         \$2,108,030         151%         2,158         38         2%         10.54         2.66           \$857,190         \$1,390,549         162%         986         984         100%         5.04         2.89	Budget         Actual         %         Budget         Actual         %         Budget         Actual         %           \$2,476,808         \$2,382,632         96%         1,537         55         4%         8.89         4.79         54%           \$1,398,553         \$2,108,030         151%         2,158         38         2%         10.54         2.66         25%           \$857,190         \$1,390,549         162%         986         984         100%         5.04         2.89         57%	Budget         Actual         %         Budget         Actual         %         Budget         Actual         %         Budget         Actual         %         Budget           \$2,476,808         \$2,382,632         96%         1,537         55         4%         8.89         4.79         54%         6,750           \$1,398,553         \$2,108,030         151%         2,158         38         2%         10.54         2.66         25%         2,838           \$857,190         \$1,390,549         162%         986         984         100%         5.04         2.89         57%         1,896	Budget         Actual         %         Budget         Actual         %         Budget         Actual         %         Budget         Actual           \$2,476,808         \$2,382,632         96%         1,537         55         4%         8.89         4.79         54%         6,750         7,460           \$1,398,553         \$2,108,030         151%         2,158         38         2%         10.54         2.66         25%         2,838         2,017           \$857,190         \$1,390,549         162%         986         984         100%         5.04         2.89         57%         1,896         1,664



### **PowerShare**

### PowerShare<sup>1</sup>

	Vintage 2019	Vintage 2019	% of
\$ in millions, rounded	As Filed	YTD December 31, 2019	Target
NPV of Avoided Cost	\$38.5	\$42.1	109%
Program Cost	\$13.3	\$13.0	98%
MW <sup>2</sup>	337.9	342.6	101%
MWH	0.0	N/A	-
Units <sup>3</sup>	318,083	322,533	101%

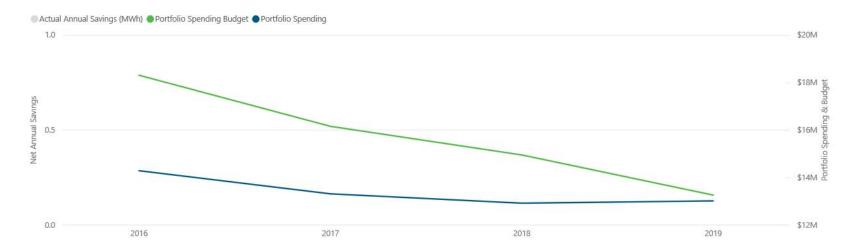
### Notes on Tables:

- 1) Values are reflected at the system level.
- 2) MW capability derived by taking average over specific PowerShare contract periods. At month-end December 2019, we had the ability to shed 342.6 MW (at the plant), representing 101% of the as filed capacity.
- 3) Units included in filing represented KW at meter, rather than number of participants.

# **DEC PowerShare**

### PowerShare Program Budget, Savings & Number of Measures

	Expe	nditures		Ene	rgy Savings		Den	nand Savings		Pi	articipants	
Program Year	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2016	\$18,313,920	\$14,291,024	78%	0	0	0%	424.80	368.90	87%	399,929	347,302	87%
2019	\$13,263,911	\$13,019,606	98%	0	0	0%	337.86	342.59	101%	318,083	322,533	101%
2017	\$16,161,676	\$13,316,535	82%	0	0	0%	371.37	340.37	92%	349,625	320,442	92%
2018	\$14,955,081	\$12,922,977	86%	0	0	0%	388.03	332.63	86%	365,308	313,157	86%



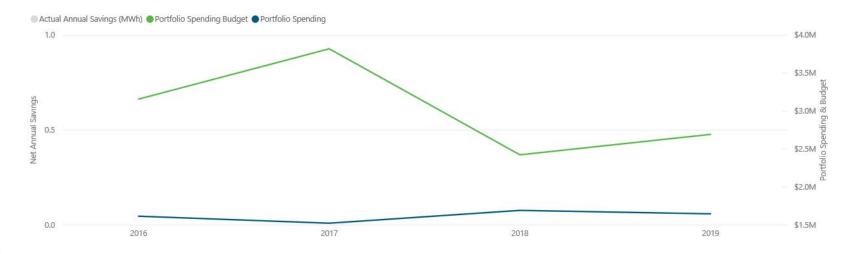
# CIG DRA

2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	N/A	N/A	N/A
Savings (MW)	29.95	25.16	-4.79
Participants		71	
2019 Program Expenses		\$1,647,027	

# **DEP CIG DRA**

### Commercial, Industrial, & Governmental Demand Response Program Budget, Savings & Number of Measures

Exper	nditures		Ene	ergy Savings		Der	nand Savings		P	articipants	
Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
42.504.250	44 547 007	6400			00/	7.26	2.57	250/			250/
\$2,694,260	\$1,647,027	61%	0	0.	0%	7,36	2.57	35%	7,000	2,442	35%
\$3,822,330	\$1,523,514	40%	0	0	0%	14.71	1.97	13%	14,000	1,873	13%
\$2,424,856	\$1,692,473	70%	0	0	0%	7.36	1.63	22%	7,000	1,550	22%
\$3,159,367	\$1,615,703	51%	0	0	0%	12.93	-5.34	-41%	12,300	0	0%
	\$2,694,260 \$3,822,330 \$2,424,856	\$2,694,260 \$1,647,027 \$3,822,330 \$1,523,514 \$2,424,856 \$1,692,473	Budget         Actual         %           \$2,694,260         \$1,647,027         61%           \$3,822,330         \$1,523,514         40%           \$2,424,856         \$1,692,473         70%	Budget         Actual         %         Budget           \$2,694,260         \$1,647,027         61%         0           \$3,822,330         \$1,523,514         40%         0           \$2,424,856         \$1,692,473         70%         0	Budget         Actual         %         Budget         Actual           \$2,694,260         \$1,647,027         61%         0         0           \$3,822,330         \$1,523,514         40%         0         0           \$2,424,856         \$1,692,473         70%         0         0	Budget         Actual         %         Budget         Actual         %           \$2,694,260         \$1,647,027         61%         0         0         0%           \$3,822,330         \$1,523,514         40%         0         0         0%           \$2,424,856         \$1,692,473         70%         0         0         0%	Budget         Actual         %         Budget         Actual         %         Budget           \$2,694,260         \$1,647,027         61%         0         0         0%         7.36           \$3,822,330         \$1,523,514         40%         0         0         0%         14.71           \$2,424,856         \$1,692,473         70%         0         0         0%         7.36	Budget         Actual         %         Budget         Actual         %         Budget         Actual           \$2,694,260         \$1,647,027         61%         0         0         0%         7.36         2.57           \$3,822,330         \$1,523,514         40%         0         0         0%         14.71         1.97           \$2,424,856         \$1,692,473         70%         0         0         0%         7.36         1.63	Budget         Actual         %         Budget         Actual         %         Budget         Actual         %           \$2,694,260         \$1,647,027         61%         0         0         0%         7.36         2.57         35%           \$3,822,330         \$1,523,514         40%         0         0         0%         14.71         1.97         13%           \$2,424,856         \$1,692,473         70%         0         0         0%         7.36         1.63         22%	Budget         Actual         %         Budget         Actual         %         Budget         Actual         %         Budget         Actual         %         Budget           \$2,694,260         \$1,647,027         61%         0         0         0%         7.36         2.57         35%         7,000           \$3,822,330         \$1,523,514         40%         0         0         0%         14.71         1.97         13%         14,000           \$2,424,856         \$1,692,473         70%         0         0         0%         7.36         1.63         22%         7,000	Budget         Actual         %         Budget         Actual         %         Budget         Actual         %         Budget         Actual           \$2,694,260         \$1,647,027         61%         0         0         0%         7.36         2.57         35%         7,000         2,442           \$3,822,330         \$1,523,514         40%         0         0         0%         14.71         1.97         13%         14,000         1,873           \$2,424,856         \$1,692,473         70%         0         0         0%         7.36         1.63         22%         7,000         1,550





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**Upstream Channel** 

# **Upstream Channel**

- Launch an Upstream channel as part of our existing prescriptive program to work directly with HVAC and Food Service manufacturers. Point of sale rebates would be offered to customers who purchase high-efficiency equipment. Goal is to drive more participation in these technologies.
- Currently, we are not capturing the participation for manufacturer direct sales in many instances. This modification to our existing prescriptive program would provide a direct extension of the core rebates through manufacturers.
- The Upstream channel would work the same as our current Midstream channel but with manufacturers instead of distributors.
- Potential manufacturers:
  - HVAC: Nest, Daikin
  - Food Service: Accutemp, Avantco

# **Upstream Channel**

 Rebates would match the measures offered in Midstream and cost effectiveness would remain the same as the current prescriptive numbers.

Cost Effectiveness	Food Service DEC	HVAC DEC	Food Service DEP	HVAC DEP	
2019	DEC	DEC			
UCT	1.12	2.13	1.21	2.14	
TRC	0.66	1.81	0.66	1.86	
RIM	0.58	0.54	0.62	0.76	
PCT	1.32	3.79	1.45	3.44	

- Next steps:
  - Develop process and communications
  - Launch early Q2



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# **Non-Residential Program Modification Ideas**

DEC/DEP Collaborative March 19, 2020

### **Review of January Discussion**

- Discussed the barriers for Business Customers to invest in EE
- Recommended Updates to Small Business Energy Saver program
  - Trade Ally centric model
  - Provide third-party, no-money upfront payment alternatives such as project financing, equipment leases, efficiency as a service (pay through savings), etc.
  - Accessible to business customers of all sizes and segments
    - Support/incentives/carve-out for small businesses
    - Extending to low-income communities
  - Sub-metering equipment and data analysis to accurately track energy savings
  - Performance-based incentives paid per actual kWh saved
  - Performance reporting back to the customer

### **Proposed Program Updates**

- Program Name updated to "Business Energy Saver" with two channels
  - Small Business Energy Saver
    - To ensure that the smallest businesses are still served, keep the current single-provider direct install model for customers up to 50 kW
      - Research on past SBES participants indicates 50 kW and below is appropriate for smaller projects (< \$15K) that do not fit SmartPath model</li>
    - SmartPath TAs may be an option if the customer requests this (Ex: multi-site customers or special equipment)
  - SmartPath (official name TBD running through legal)
    - Customers > 50 kW
    - Authorized Trade Allies perform the work
    - SBES vendor may be an option if no authorized TAs are suitable (Ex: rural areas, low income communities)
- For both options, incentive payments based on the projected energy savings, for EE equipment such as in lighting; refrigeration; HVAC; variable frequency drives; and other commercial and industrial equipment.

### **Proposed Program Updates, cont.**

### SmartPath

- In most cases, require a minimum amount of usage history and/or pre-monitoring of equipment energy usage
- The program will identify Authorized Trade Allies, and enter into agreements with them to follow program rules and processes
- Authorized Trade Allies will



- Financing options will be between the customer and the TA or another lender.
- The program will provide information on projected savings which the customer could plan to use for repayment

### **Development Activities to Date**

# Program Administrator - Request for Proposal

- Scope of work to include a web-based platform for Trade Allies and the Program team, resources for training, TA and customer support
- 22 prospective bidders invited; 16 expressed interest so far
- Proposals due April 10

### Marketing

- Working name "SmartPath" still subject to final business and legal approval
- SMB Customer Panel Survey scheduled for April to validate assumptions around barriers and help prioritize the Program emphasis

### TA feedback

• Informal feedback received from 3 existing S\$ trade allies; very interested but questions point to need for training and tools for them to adjust to this new model

### **Customer Journey Mapping**

### **Timeline**

- March 9 RFP issued
- March 19 DEC/DEP Collaborative
- April 10 program administrator proposals due
- April SMB customer panel survey
- April/May file updated Business Energy Saver tariff
  - Timing subject to the proposal pricing, and issues identified by bidders
- Summer Program approval
- Following program approval
  - Sign contract with program administrator
  - Recruit trade allies
  - Train trade allies
- Late 2020 Begin marketing SmartPath

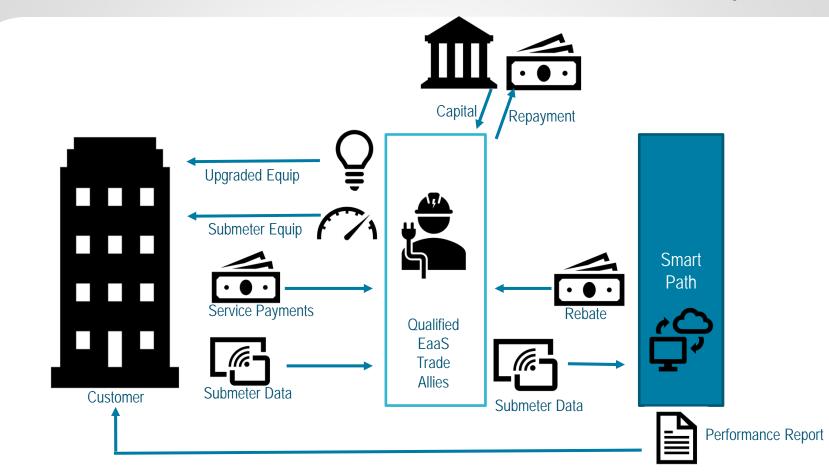
### **Cost Effectiveness**

- Preliminary assessment
  - Avg UCT 2.9
  - Avg TRC 1.6
- To be updated with revised program administration costs

# **EaaS Measure Details**

Measure Name	Notes	Measure Life
HVAC AC New System	New air conditioning systems	15
HVAC HP New System	New heat pump systems	15
	Air conditioning only = Full tune-up (w/ refrigerant charge), VFD HVAC fans, Advanced RTU controls, EC motors	
HVAC AC Optimization	on compressors, network control thermostats, etc.	15
HVAC HP Optimization	All optimization above but for AC + electric heat (heat pumps)	15
HVAC AC New System w/ Optimize	New AC system with optimization measures	15
HVAC HP New System w/ Optimize	New heat pump system with optimization measures	15
Lighting 8760	all LED measures (retrofits & new fixtures, lamps) operating at least 8,040 hours per year (335 days, 24 hrs/day)	15
	all LED measures (retrofits & new fixtures, lamps) operating mostly within normal business hours (generally 6a -	
Lighting Day	7p)	15
Lighting Night	all LED measures (retrofits & new fixtures, lamps) operating mostly overnight	15
	lighting controls (connected or otherwise) added to existing lighting operating at least 8,040 hours per year (335	
Existing Lighting w/ Controls 8760	days, 24 hrs/day)	3
Existing Lighting w/ Controls Day	lighting controls (connected or otherwise) added to existing lighting operating mostly within normal business hours	S 8
Existing Lighting W/ Controls Night	lighting controls (connected or otherwise) added to existing lighting operating mostly overnight	8
New Lighting w/ Controls 8760	new LED measures with new controls operating at least 8,040 hours per year (335 days, 24 hrs/day)	15
New Lighting w/ Controls Day	new LED measures with new controls operating mostly within normal business hours (generally 6a - 7p)	15
New Lighting W/ Controls Night	new LED measures with new controls operating mostly overnight	15
Refrigeration New Equipment	All new refrigeration equipment	15
Refrigeration Optimization	Cooler/Freezer ECMS, anti-sweat heater controls, etc	12
C&I Equipment	non-HVAC Optimization (incl VFDs), VSD Air Compressor	15

# **Proposed Model**





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### **Proposed Customer Journey**

- 1. Customer receives marketing from program
- 2. Customer fills out form, calls Duke or requests call back; provides basic information on facility
- Customer is contacted by TA(s) to schedule audit(s)
- 4. Customer audit(s) performed by TA(s)
- 5. Customer receives proposal(s) from TA(s) to include Program Proposal & TA-Customer Contract
- 6. Customer says yes or no to TA
- 7. If applicable, Customer gives TA (or 3rd party) required data to qualify for project financing
- 8. TA installs submeters for pre-monitoring
- 9. Customer may receive revised proposal based on sub-metered data
- 10. Installation scheduled and started; Change Orders as needed
- 11. Installation complete
  - a. Start 2 week post-monitoring
  - b. If needed, TA contacts customer to address low savings
- 12. Customer begins payments to TA
- 13. Customer receives savings report from Program

### **Trade Ally Draft Requirements**

- Trade Allies must be qualified to participate in "SmartPath"
  - Sign an agreement with the Program
  - Agree to code of conduct
  - Participate in Program training
  - Agree to the SmartPath process
  - Compete with other trade allies during the process
  - Update the Program on projects via a web-based platform provided by the Program Administrator
  - Address projects with savings lower than expected
  - Provide or help arrange project financing for customers



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**DEP Weatherization Recap** 



# Wrap Up, Scheduling, Topics for Future Collaboratives

