

Forest Bradley-Wright

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(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.

Owner and Director: EcoPark LLC (d.b.a. The Building Block), New Orleans, LA **February 2008 – Present**

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 10th, 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 20th, 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 25th, 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 15th, 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 9th, 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 1st, 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 20th, 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 25th, 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 7th, 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 19th, 2015

PUBLICATIONS

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

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

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



CCL-SACE%20DR1-1
4.xlsx

Duke Energy Carolinas

CCL_SACE DR 1-14

2019 Incremental Energy Savings	794,856,771 kWh	Evans Exhibit 1 page 3 (2019) line 28 - adjusted for line loss
2019 Opt Out Electricity Sales - NC	20,042,218,854 kWh	Miller Exh 6, Line 8
2019 Opt Out Electricity Sales - SC	10,446,567,023 kWh	Exhibit 3 pg 1 of 2, Line 12
2018 System Retail Billed Electricity Sales	81,399,234 MWh	2018 RAC Report
2021 Incremental Energy Savings	715,710,984 kWh	Evans Exhibit 1 page 4 (2021) line 27 - adjusted for line loss
2021 Opt Out Electricity Sales - NC	20,419,288,797 kWh	Miller Exh 6, Line 12
2021 Opt Out Electricity Sales - SC	10,490,870,196 kWh	Exhibit 3 pg 1 of 2, Line 16
2020 System Retail Electricity Sales	80,141,016 MWh	2019 Fall 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 MWh	
2018 System Retail Electricity Sales	81,399,234 MWh	
Savings as % of 2018 Sales		0.98%
2019 Incremental Energy Savings	794,856.77 MWh	
2018 System Retail Electricity Sales, net of 2019 Opt Out	50,910,448 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 and Southern Alliance for Clean Energy
Second Data Request
Public Service Commission of South Carolina Docket No. 2019-89-E
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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



CCL-SACE DR2-2.xlsx

Duke Energy Carolinas

CCL_SACE DR 2-2

2014 Incremental Energy Savings	508,689,316	kWh	Year 2014 Exhibit 2 - line 31 adjusted for line loss
2014 Opt Out Electricity Sales - NC	17,153,650,420	kWh	workpapers
2014 Opt Out Electricity Sales - SC	9,992,960,564	kWh	workpapers
2013 System Retail Billed Electricity Sales	76,021,887	MWh	2013 RAC Report
2015 Incremental Energy Savings	614,743,741	kWh	Year 2015 Exhibit 2 - line 32 adjusted for line loss
2015 Opt Out Electricity Sales - NC	17,296,168,323	kWh	Miller Exhibit 6
2015 Opt Out Electricity Sales - SC	9,824,240,223	kWh	Exhibit 3 pg 1 of 2
2014 System Retail Billed Electricity Sales	78,277,836	MWh	2014 RAC Report
2016 Incremental Energy Savings	754,838,256	kWh	Year 2016 Exhibit 2 - line 33 adjusted for line loss
2016 Opt Out Electricity Sales - NC	17,541,642,770	kWh	Miller Exhibit 6
2016 Opt Out Electricity Sales - SC	10,115,080,343	kWh	Exhibit 3 pg 1 of 2
2015 System Retail Billed Electricity Sales	79,056,620	MWh	2015 RAC Report
2017 Incremental Energy Savings	879,954,382	kWh	Year 2017 Exhibit 2 - line 33 adjusted for line loss
2017 Opt Out Electricity Sales - NC	17,749,899,702	kWh	Miller Exhibit 6
2017 Opt Out Electricity Sales - SC	10,211,024,604	kWh	Exhibit 3 pg 1 of 2
2016 System Retail Billed Electricity Sales	79,090,737	MWh	2016 RAC report
2018 Incremental Energy Savings	811,152,170	kWh	Year 2018 Exhibit 2 - line 33 adjusted for line loss
2018 Opt Out Electricity Sales - NC	18,347,183,120	kWh	Miller Exh 6, Line 10
2018 Opt Out Electricity Sales - SC	10,257,713,985	kWh	Exhibit 3 pg 1 of 2, Line 14
2017 System Retail Billed Electricity Sales	77,059,079	MWh	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%	

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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%20-%20D
R1-4.xlsx

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

total costs and benefits for 2015, 2016, 2017, 2018, and 2019

2015			2016			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	3.07	43,889,394	14,291,024	3.07	41,482,644	13,316,535
		(3,851)						
3.61	354,819,144	110,378,109	3.21	466,592,598	151,574,107	3.08	623,167,221	192,488,915

2018

2018								
UCT	NPV of AC	Program Cost	Participant Incentives	NPV Participant 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	2,519,645	1,684,083
3.47	135,857,936	42,687,244	35,592,245	18,585,822	3.18	5.29	102,051,327	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	3,648,597	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	4,413,585	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	69,783,157	13,383,639
4.80	67,306	407,293	7,794	24,493	0.17	0.16	691,285	295,925
4.75	23,322,046	6,068,902	3,495,543	13,128,691	3.84	1.49	35,884,367	8,871,440
	-	-	-	-		-	-	-
3.13	431,679	235,605	172,207	332,863	1.83	1.09	364,227	339,904
1.90	2,810,168	1,620,748	1,418,533	1,481,662	1.73	1.67	4,481,911	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	510,415	189,123
0.01	3,025	36,875	3,528	2,491	0.08	0.08	1,038	44,323
3.27	226,725	67,509	51,787	49,376	3.36	3.48	310,293	119,811
0.03	1,671,793	479,610	279,680	1,420,247	3.49	1.03	2,238,186	784,949
3.64	46,832,942	15,977,993	14,439,122	22,510,536	2.93	1.95	25,661,729	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

2019

Participant Incentives	NPV Participant 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

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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%201-16.xlsx

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

Source:	DSM		EE		Total Non-Residential Sales (kWh)	
	Actual	Forecasted	Actual	Forecasted	Actual	Forecasted
	2019	2021	2019	2021	2019	2021
NC Miller Exhibit 6	18,852,615,603	18,851,271,603	20,042,218,854	20,419,288,797	36,550,697,769	35,749,634,396
SC R12 Exhibit 3 page 1	9,402,889,130	9,402,889,130	10,446,567,023	10,490,870,196	14,697,398,282	14,895,366,192
Total	28,255,504,733	28,254,160,733	30,488,785,877	30,910,158,993	51,248,096,051	50,645,000,588

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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.



CCL-SACE DR1-2 -
NC.pdf



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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
<i>North Carolina (System View)</i>	28,169,497	36,418,438	49,809,308	41,339,396	33,457,516	28,050,720	27,126,188
<i>North Carolina View (Allocated)</i>	20,711,621	26,743,114	36,358,448	30,132,647	24,566,073	20,487,368	19,945,446
<i>South Carolina (System View)</i>	31,933,599	40,421,159	54,472,631	55,126,315	39,012,353	33,119,827	34,712,888
<i>South Carolina View (Allocated)</i>	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 Income Qualified Energy Efficiency and Weatherization Assistance

Name	Annual kWh at Plant, Net FR	Annual kW at Plant, Net FR	NC 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	<u>3,125,184</u>	<u>608</u>	

2015 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	1,671,720	392
Low Income Weatherization- Refrigerator Replacement	37,935	4
Low Income Weatherization- Tier 1	16,450	3
Low Income Weatherization- Tier 2	553,919	44
Totals	<u>2,280,024</u>	<u>444</u>

2016 Income Qualified Energy Efficiency and Weatherization Assistance

Name	Annual kWh at Plant, Net FR	Annual kW at Plant, Net FR	NC Allocation
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	<u>4,801,478</u>	<u>649</u>	

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 Replacement	123,294	14
Low Income Weatherization- Tier 1	16,278	3
Low Income Weatherization- Tier 2	1,080,385	86
Totals	<u>3,509,702</u>	<u>474</u>

2017 Income Qualified Energy Efficiency and Weatherization Assistance

Name	Annual kWh at Plant, Net FR	Annual kW at Plant, Net FR	NC Allocation
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	<u>5,341,624</u>	<u>771</u>	

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 Replacement	139,430.19	15.88
Low Income Weatherization- Tier 1	9,728	2
Low Income Weatherization- Tier 2	767,677	61
Totals	<u>3,889,170</u>	<u>561</u>

2018 Income Qualified Energy Efficiency and Weatherization Assistance

Name	Annual kWh at Plant, Net FR	Annual kW at Plant, Net FR	NC Allocation
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	<u>6,973,243</u>	<u>904</u>	

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 Replacement	174,289.20	19.85
Low Income Weatherization- Tier 1	14,775.89	2
Low Income Weatherization- Tier 2	958,768.18	76
Totals	<u>5,070,458</u>	<u>657</u>

2019 Income Qualified Energy Efficiency and Weatherization Assistance

2019 Income Qualified Energy Efficiency and Weatherization Assistance - NC Allocation

Name	Annual kWh at Plant, Net FR	Annual kW at Plant, Net FR	NC Allocation
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	<u>9,029,752</u>	<u>1,105</u>	

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 Replacement	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	<u>6,599,881</u>	<u>808</u>

2020 Income Qualified Energy Efficiency and Weatherization Assistance

Name	Annual kWh at Plant, Net FR	Annual kW at Plant, Net FR	NC Allocation
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	<u>4,245,993</u>	<u>653</u>	

2020 Income Qualified Energy Efficiency and Weatherization Assistance - NC Allocation

Name	Annual kWh at Plant, Net FR	Annual kW at Plant, Net FR
Low Income Weatherization- Refrigerator Replacement	152,157.24	17
Low Income Weatherization- Tier 1	18,216.85	3.07
Low Income Weatherization- Tier 2	234,880.90	18.68
Low Income Neighborhood	2,682,135.85	435
Totals	<u>3,087,391</u>	<u>475</u>

2021 Income Qualified Energy Efficiency and Weatherization Assistance

Name	Annual Cumulative kWh w/losses Net Free	Annual Cumulative Summer Coincident kW w/losses Net Free	NC Allocation
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	-	73.09%
Totals	<u>9,167,483</u>	<u>1,658</u>	

2021 Income Qualified Energy Efficiency and Weatherization Assistance - NC Allocation

Name	Annual Cumulative kWh w/losses Net Free	Annual Cumulative Summer Coincident kW w/losses Net Free
Low Income Weatherization- Refrigerator Replacement	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	<u>6,700,549</u>	<u>1,212</u>

2015 Income Qualified Energy Efficiency and Weatherization Assistance

Meas #	Name	Lost Revenue Earned in 2015	Lost Revenue Earned in 2016	Lost Revenue Earned in 2017	Lost Revenue Earned in 2018	Lost Revenue Earned in 2019	Lost Revenue Earned in 2020	Lost Revenue Earned in 2021
	Low Income Neighborhood	838,328	1,485,950	#####	586,930			-
	Low Income Weatherization- Ref	11,144	48,953	48,953	28,556			-
	Low Income Weatherization- Tier	5,722	21,228	21,228	12,383			-
	Low Income Weatherization- Tier	185,608	714,794	714,794	416,963			-
	Totals	<u>1,040,801</u>	<u>2,270,925</u>	<u>#####</u>	<u>#####</u>	<u>-</u>	<u>-</u>	<u>-</u>

2016 Income Qualified Energy Efficiency and Weatherization Assistance

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

2017 Income Qualified Energy Efficiency and Weatherization Assistance

Meas #	Name	Lost Revenue Earned in 2015	Lost Revenue Earned in 2016	Lost Revenue Earned in 2017	Lost Revenue Earned in 2018	Lost Revenue Earned in 2019	Lost Revenue Earned in 2020	Lost Revenue Earned in 2021
	Low Income Neighborhood			102,129	149,915	97,191	39,129	-
	Low Income Weatherization- Refrigerator Replacement			5,730	9,136	5,929	2,748	-
	Low Income Weatherization- Tier 1			480	669	434	163	-
	Low Income Weatherization- Tier 2			33,112	50,891	32,960	13,591	-
	Totals	<u>-</u>	<u>-</u>	<u>#####</u>	<u>#####</u>	<u>136,514</u>	<u>55,631</u>	<u>-</u>

2018 Income Qualified Energy Efficiency and Weatherization Assistance

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

Portfolio Level Opportunities & Challenges Summary Report

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 8th, 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.¹ 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

¹ 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
 - 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)
 - 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 growth-related 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

- 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

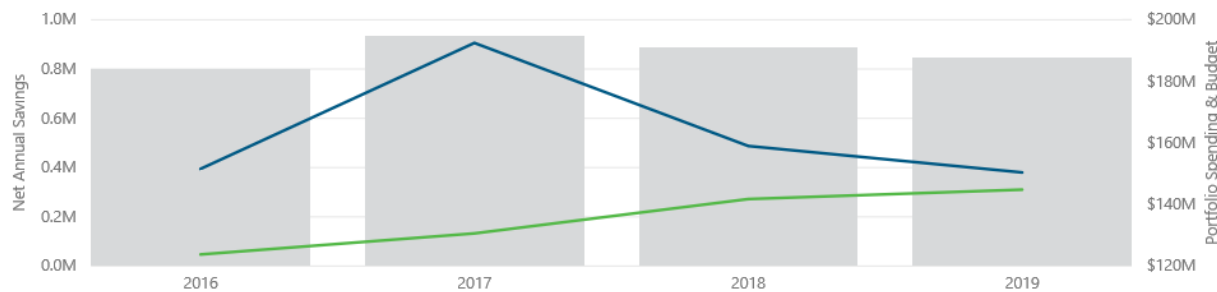
Prior Year & YTD Revenues & Expenditures

Program Year	Total Revenue (\$MM)	Budget		Actual	
		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

Program Year	Prior Yr Annual Energy Sales (Net of Opt-Out)	Budget		Actual	
		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%

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



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

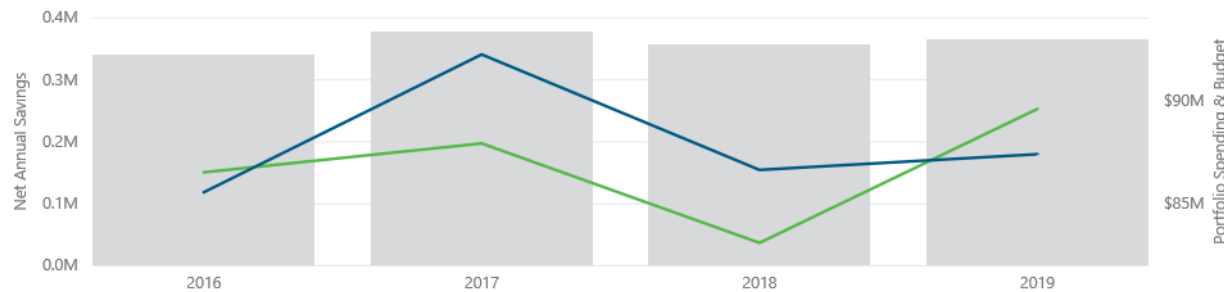
Prior Year & YTD Revenues & Expenditures

Program Year	Total Revenue (\$MM)	Budget		Actual	
		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

Program Year	Prior Yr Annual Energy Sales (Net of Opt-Out)	Budget		Actual	
		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%

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



Note:

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

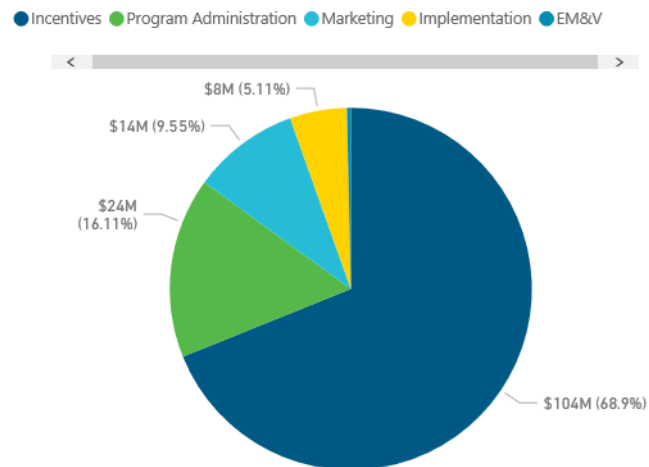
DEC Portfolio Support

2019 EE Portfolio Expenditures by Program

Program	Program Type	Actual Costs	Budget Costs	%
Energy Assessments	Residential-EE	\$3,186,888	\$2,987,118	107%
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	79%
PowerManager	Residential-DSM	\$13,383,639	\$14,055,575	95%
Non Residential Energy Efficient ITEE	Non-Residential-EE	\$44,323	\$749,325	6%
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	16%
Non Residential Smart Saver Custom	Non-Residential-EE	\$8,871,440	\$10,095,189	88%
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	38%
Non Residential Smart Saver Energy Efficient Lighting Products	Non-Residential-EE	\$20,829,118	\$17,828,618	117%
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	78%
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	104%

2019 EE Portfolio Expenditure Summary by Cost Type

Cost Category	% of Total	Budget Costs	Actual Costs	% of Total
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%
Total	100.00%	\$144,837,499	\$150,420,388	100.00%



DEP Portfolio Support

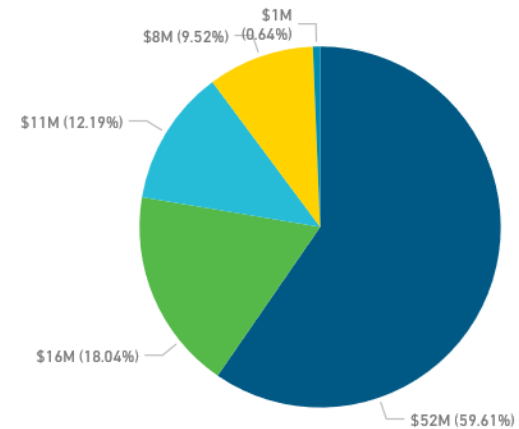
2019 EE Portfolio Expenditures by Program

Program	Program Type	Actual Costs	Budget Costs	%
Appliances and Devices	Residential-EE	\$1,226,733	\$1,527,511	80%
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	0%
Multi-Family	Residential-EE	\$2,151,724	\$2,738,339	79%
My Home Energy Report	Residential-EE	\$6,746,551	\$7,994,059	84%
Neighborhood Energy Saver	Residential-EE	\$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 SmartSaver	Residential-EE	\$6,397,527	\$3,985,069	161%
EnergyWise	Residential-DSM	\$14,537,464	\$14,086,536	103%
Non-Residential SmartSaver Custom	Non-Residential-EE	\$2,769,305	\$2,719,960	102%
Non-Residential SmartSaver Performance	Non-Residential-EE	\$269,460	\$845,910	32%
Non-Residential SmartSaver 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%
EnergyWise for Business	Non-Residential-DSM	\$2,382,632	\$2,476,808	96%
Total		\$87,400,540	\$89,592,768	98%

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%

● Incentives ● Program Administration ● Marketing ● Implementation ● EM&V





Residential Program Updates



Income-Qualified Programs

Neighborhood Energy Savers

Income Qualified Energy Efficiency and Weatherization Assistance¹

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

1) 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	Total Paid
Refrigerator Replacement	190	\$ 158,940.83
Weatherization Tier 1	70	\$ 39,428.03
Weatherization Tier 2	353	\$ 910,446.96
HVAC Replacment	238	\$ 1,404,793.47
Total	851	\$ 2,513,609.29

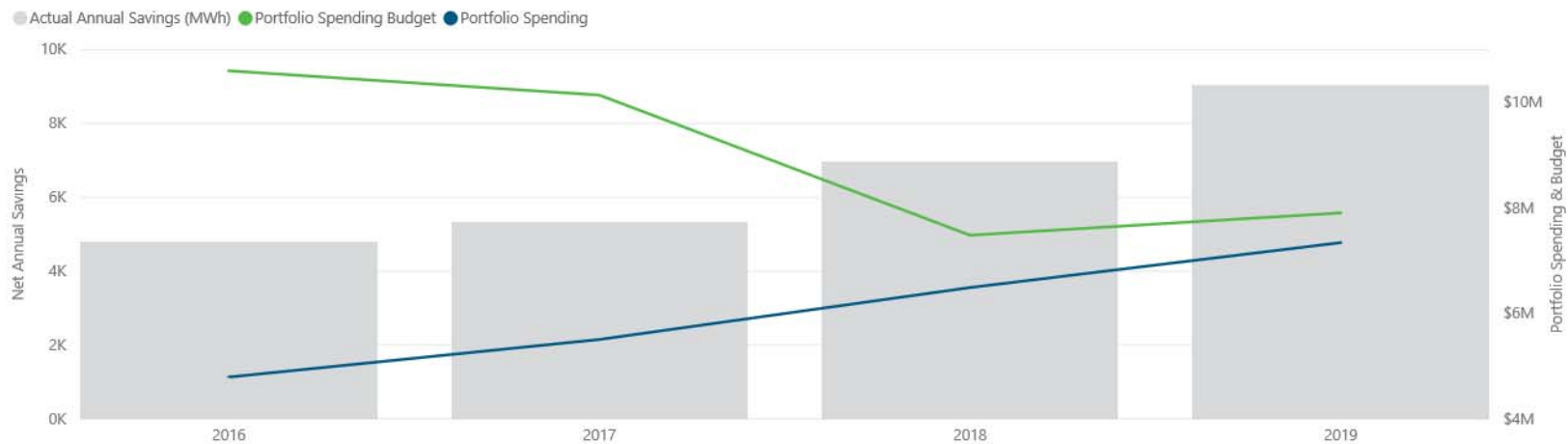
NC		
DEC Wx - Project Type	Projects	Total Paid
Refrigerator Replacement	120	\$ 104,706.00
Weatherization Tier 1	70	\$ 39,428.03
Weatherization Tier 2	353	\$ 910,446.96
HVAC Replacment	222	\$ 1,316,592.01
Total	765	\$ 2,371,173.00

SC		
DEC Wx - Project Type	Projects	Total 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

Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	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%

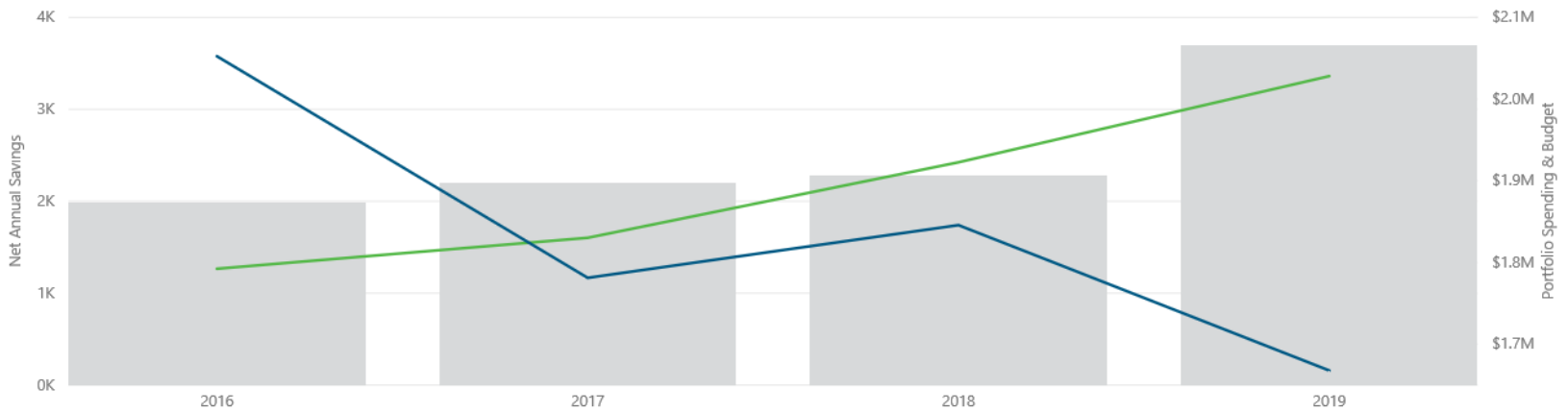


DEP NES

Neighborhood Energy Saver Program Budget, Savings & Number of Measures

Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	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%

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



Programs that are free to Participants

Multi-Family Energy Efficiency

Multi-Family Energy Efficiency¹

<i>\$ in millions, rounded</i>	Vintage 2019	Vintage 2019	% of
	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%

1) 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

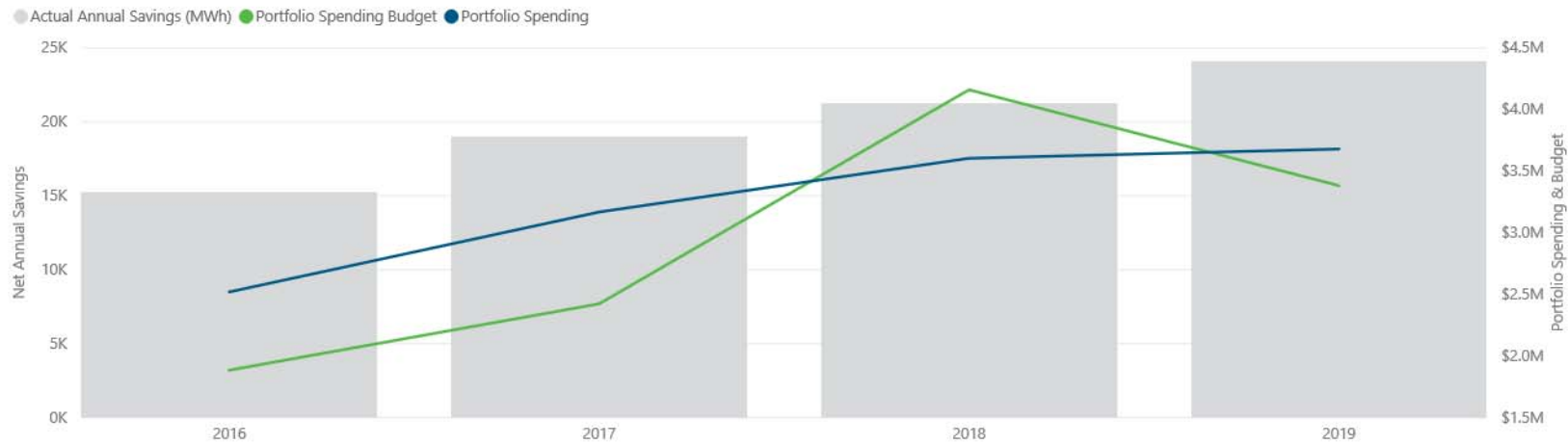
- Total 112 properties in DEP (15, 763 units) and 293 in DEC (46,422 units)
- 71+% lighting measures, remaining is water measures
- Marketing:
 - Outbound calls and on-site visits to property managers
 - Apartment association memberships, trade shows
 - Public website
 - Brochures
 - Tenant materials

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

Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	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%

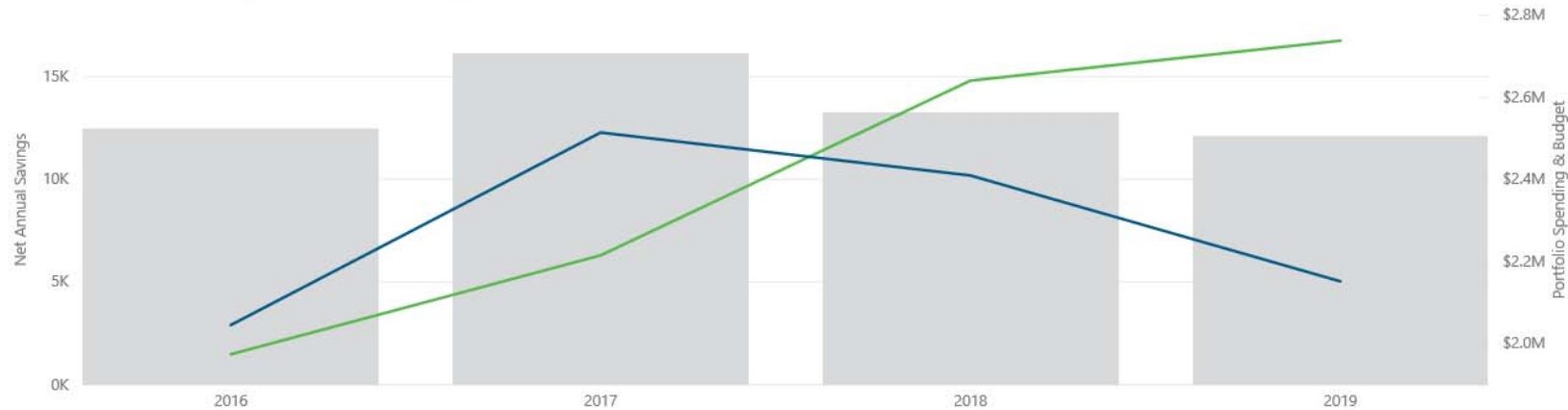


DEP Multifamily

Multi-Family Program Budget, Savings & Number of Measures

Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2017	\$2,215,099	\$2,514,413	114%	10,444	16,151	155%	1.02	2.05	200%	201,072	297,837	148%
2018	\$2,640,920	\$2,409,743	91%	13,579	13,292	98%	1.84	1.74	95%	264,177	288,093	109%
2019	\$2,738,339	\$2,151,724	79%	15,206	12,107	80%	2.13	1.62	76%	291,444	285,365	98%
2016	\$1,974,027	\$2,045,220	104%	10,993	12,462	113%	1.08	1.48	137%	211,656	240,436	114%

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



My Home Energy Reports (MyHER)

My Home Energy Report¹

<i>\$ in millions, rounded</i>	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	\$20.9	\$23.4	112%
Program Cost	\$13.4	\$10.6	79%
MW²	79.4	91.4	115%
MWH²	312,934.1	328,439.1	105%
Units³	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%

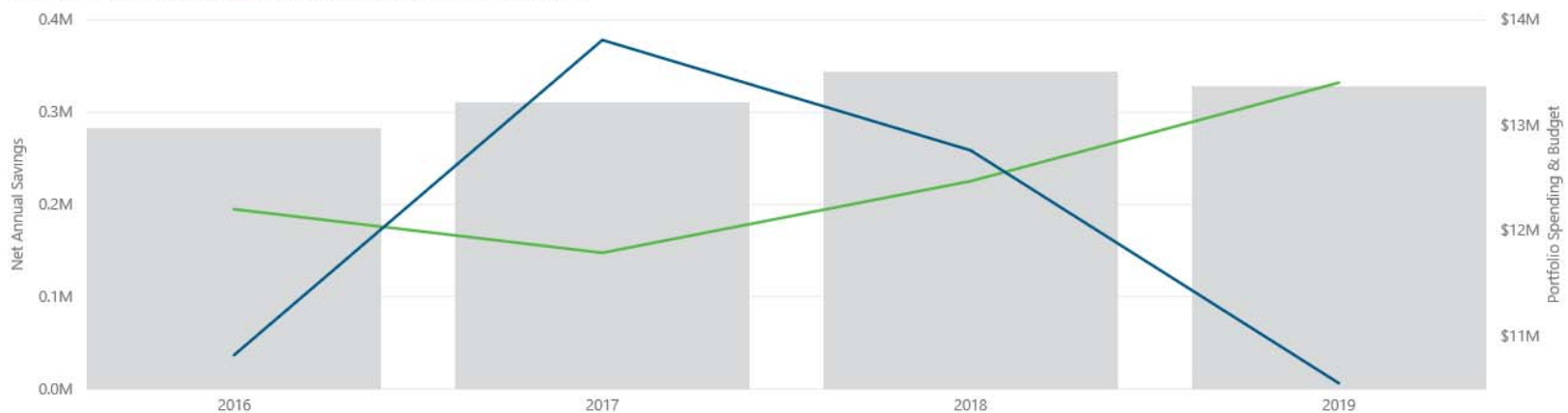
DEC My Home Energy Reports

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



Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2018	\$12,472,487	\$12,765,286	102%	304,387	344,760	113%	77.28	95.89	124%	1,354,138	1,432,263	106%
2017	\$11,792,498	\$13,812,250	117%	211,048	311,369	148%	56.98	79.07	139%	1,050,000	1,394,693	133%
2019	\$13,406,971	\$10,555,159	79%	312,934	328,439	105%	79.36	91.39	115%	1,364,000	1,339,152	98%
2016	\$12,206,008	\$10,822,444	89%	204,880	283,570	138%	55.32	71.81	130%	1,050,000	1,202,664	115%

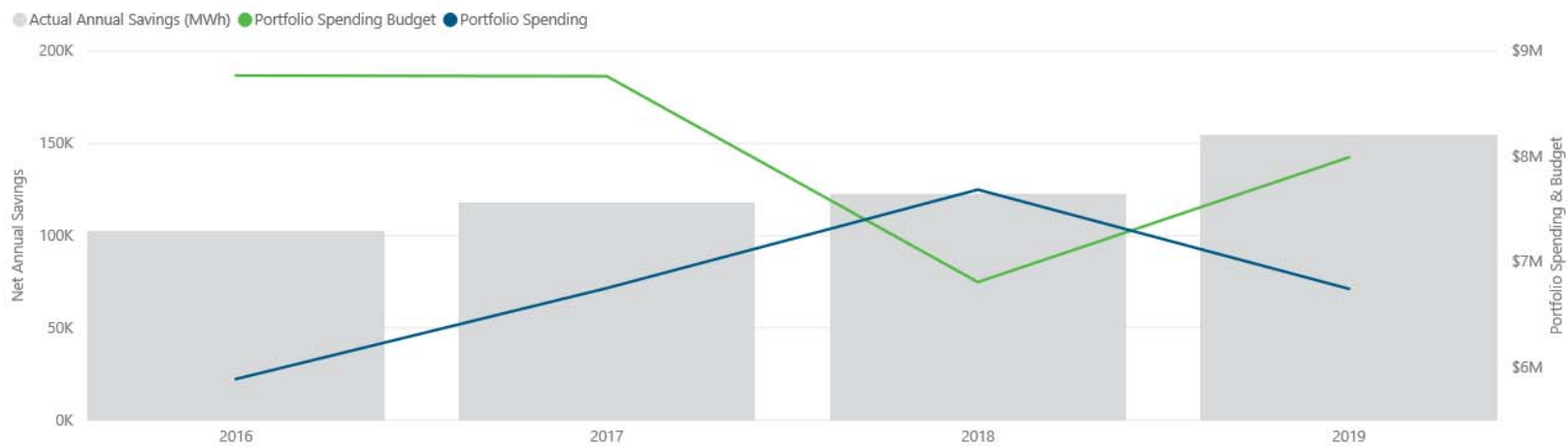
● Actual Annual Savings (MWh) ● Portfolio Spending Budget ● Portfolio Spending



DEP My Home Energy Reports

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

Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
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 Education¹

<i>\$ in millions, rounded</i>	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of 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%

1) 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

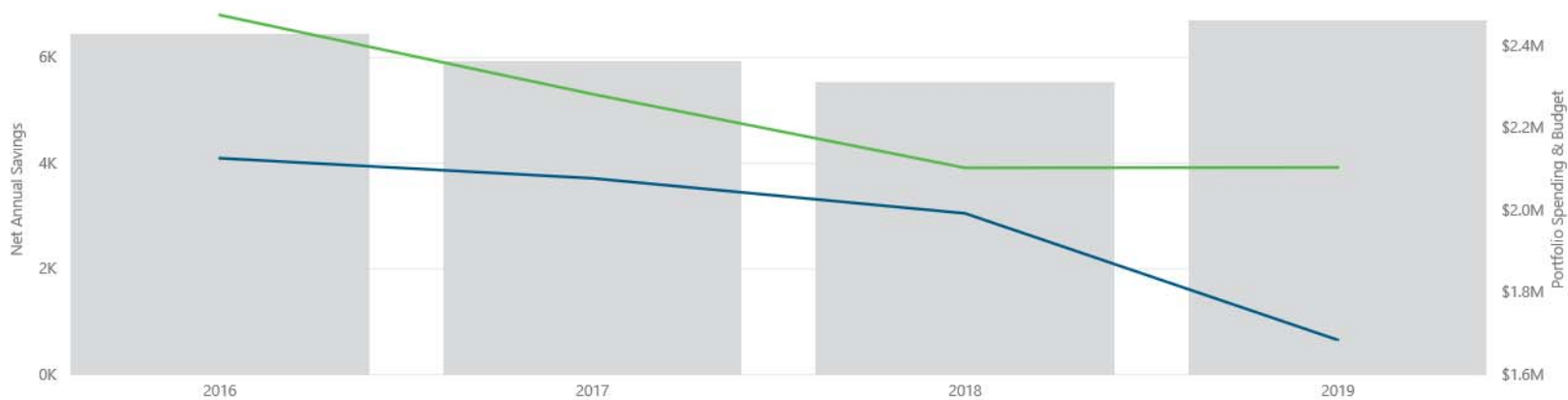
DEC EE in Education

Energy Efficiency Education Program Budget, Savings & Number of Measures

Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2016	\$2,474,928	\$2,126,509	86%	6,580	6,441	98%	0.69	1.51	219%	26,250	30,170	115%
2017	\$2,282,458	\$2,077,611	91%	5,604	5,932	106%	1.32	1.39	106%	26,250	27,785	106%
2019	\$2,104,087	\$1,684,083	80%	5,702	6,714	118%	1.34	0.84	63%	26,705	24,785	93%
2018	\$2,103,036	\$1,992,260	95%	5,604	5,531	99%	1.32	0.97	73%	26,250	22,901	87%



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

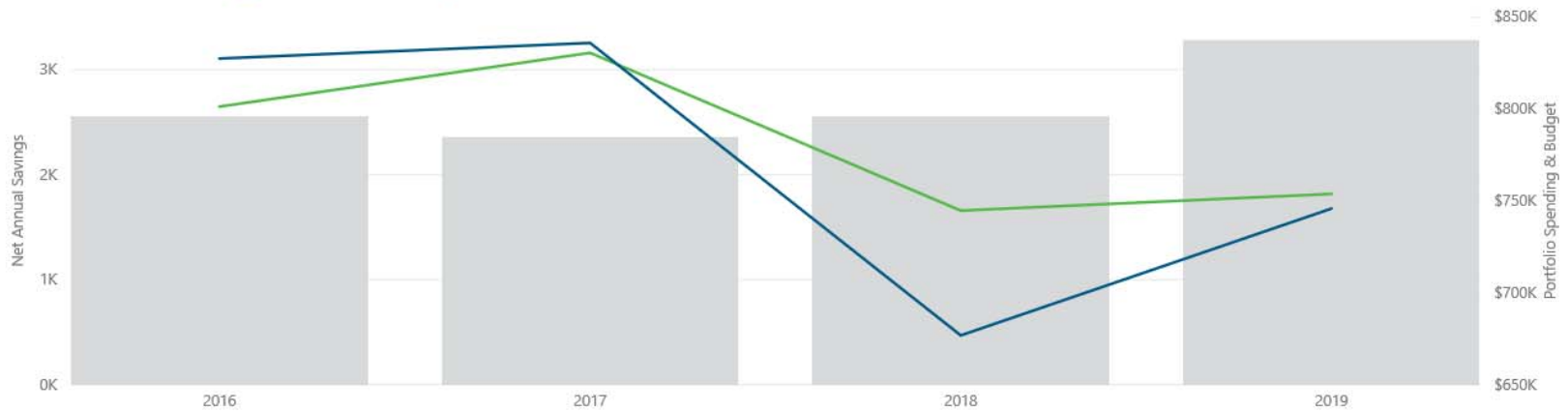


DEP EE in Education

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

Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	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%

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



Home Energy House Call

Energy Assessments¹

<i>\$ in millions, rounded</i>	Vintage 2019	Vintage 2019	% of
	As Filed	YTD December 31, 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

Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	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%

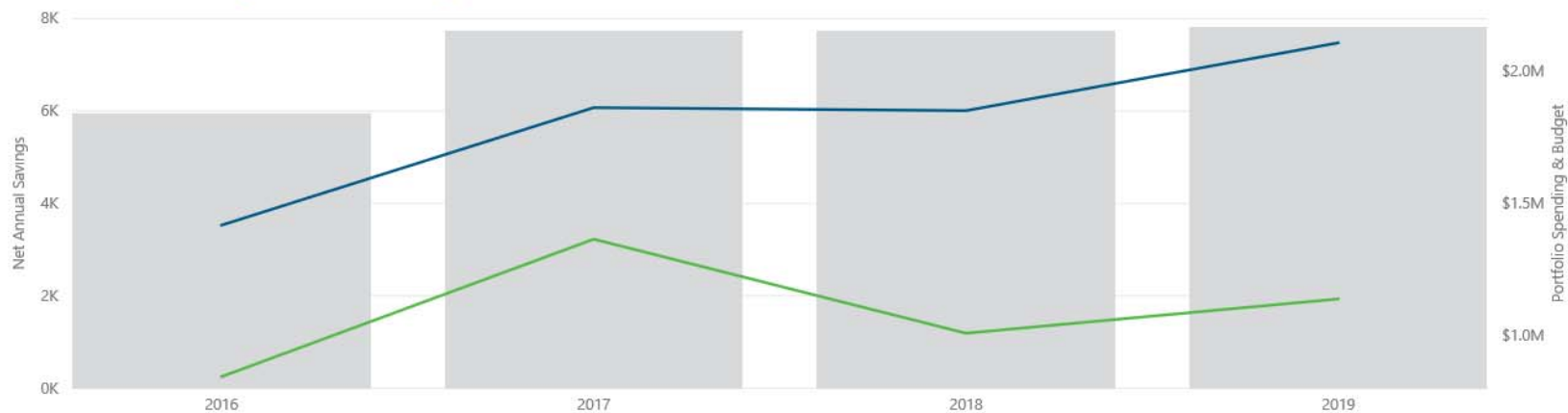


DEP Home Energy House Call

Residential Energy Assessments Program Budget, Savings & Number of Measures

Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
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%

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



Save Energy and Water Kits**

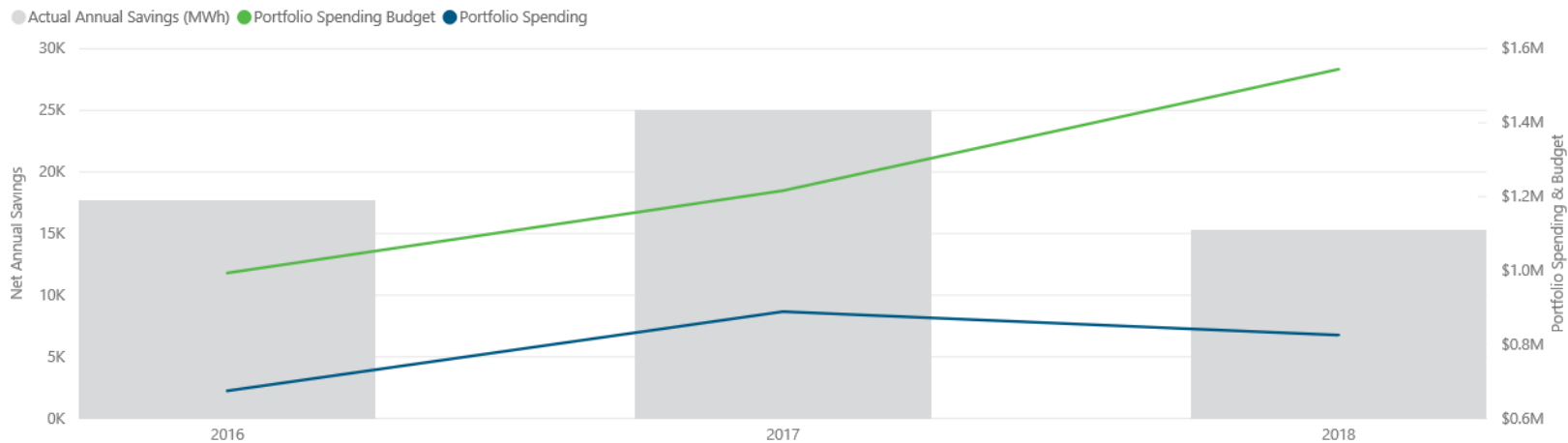
2019 YTD Results	Annual Forecast	Actual at 12/31/2019	Variation
Savings (MWH)	30,940	16,709	-14,231
Savings (MW)	8.91	5.05	-3.87
Participants		253,098	
2019 Program Expenses		\$1,226,733	

Save Energy 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

Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	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 Devices¹

<i>\$ in millions, rounded</i>	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of 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%

1) Values are reflected at the system level.

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

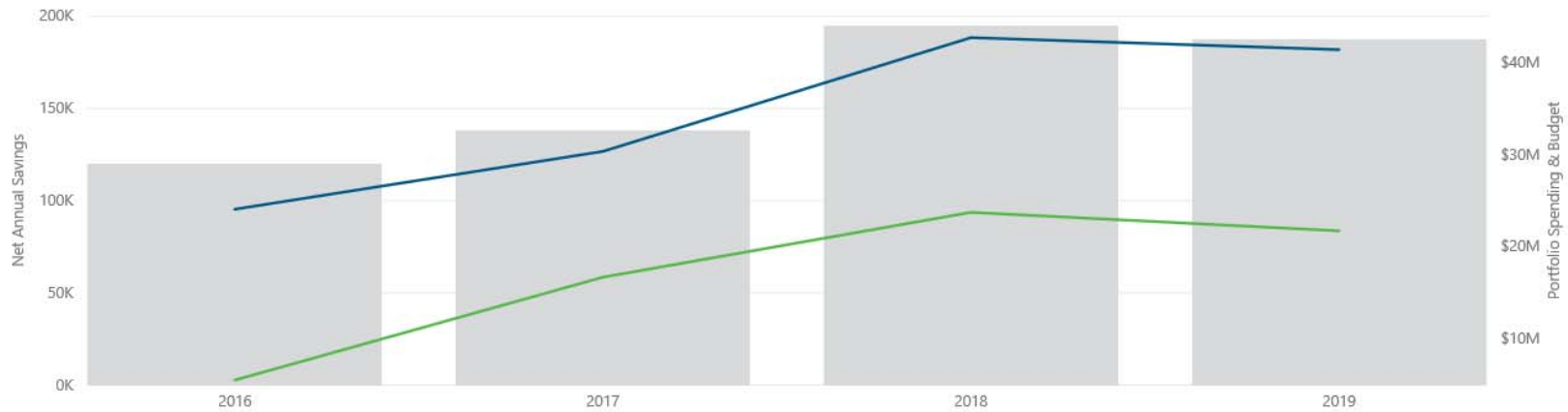
- For DEC, includes Free LEDs, SEWK, Retail Lighting, Specialty Lighting and Online Store
- 43,578 orders thru OLS for 331,095 bulbs; 11,724 smart thermostats; 3,553 smart strips; and 220 water measures, 639 LED fixtures
- Over 99 percent of customers accessed OLS via the public website, while 1 percent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

Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
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%

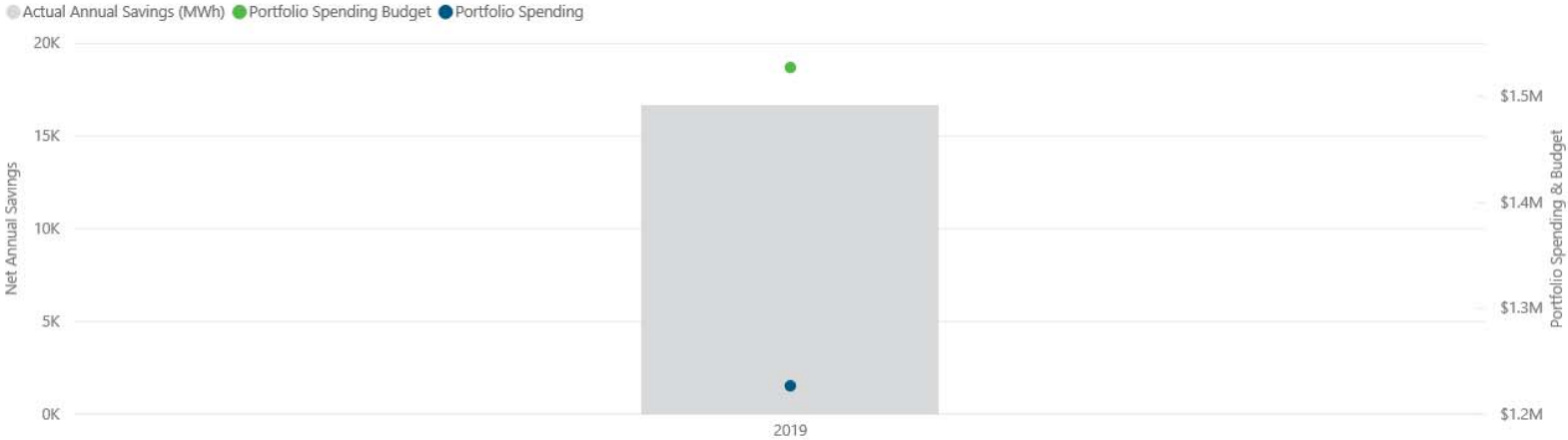
● Actual Annual Savings (MWh) ● Portfolio Spending Budget ● Portfolio Spending



DEP Appliances and Devices

Appliances and Devices Program Budget, Savings & Number of Measures

Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2019	\$1,527,511	\$1,226,733	80%	30,940	16,709	54%	8.91	5.05	57%	452,400	253,098	56%



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

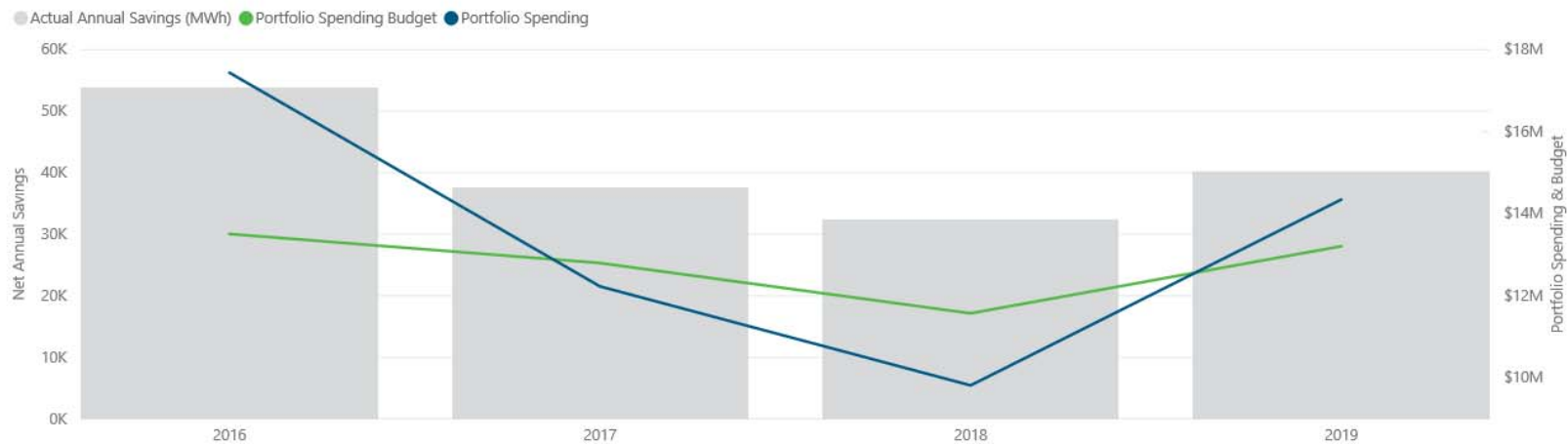
Retail Lighting Program (DEC)		
State	Participation (Bulbs)	Split
DEC (NC)	2,683,079	77%
DEC (SC)	793,363	23%
Total	3,476,442	100%

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

Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
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 Program¹

<i>\$ in millions, rounded</i>	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of 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%

1) 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

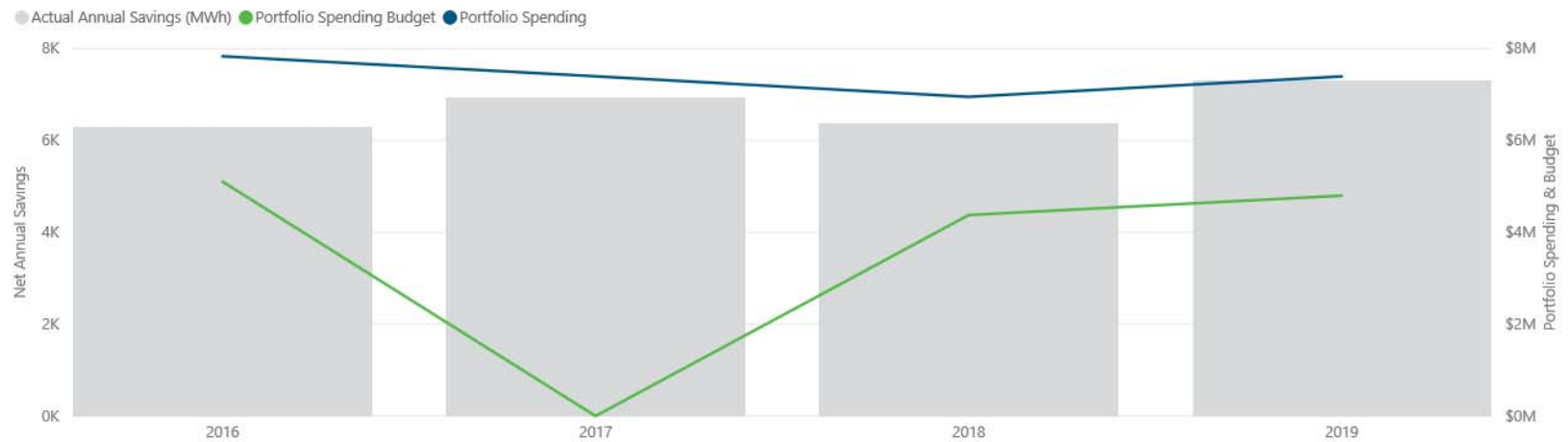
- The Referral Channel generated over 15,668 customer referrals during 2019 with a 95% customer satisfaction rating

NC		SC	
DEC	DEP	DEC	DEP
22,645	21,209	3,979	790
46%	44%	8%	2%
Total NC 43,854		Total SC 4,769	

DEC Smart Saver HVAC

HVAC Energy Efficiency Program Budget, Savings & Number of Measures

Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	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%

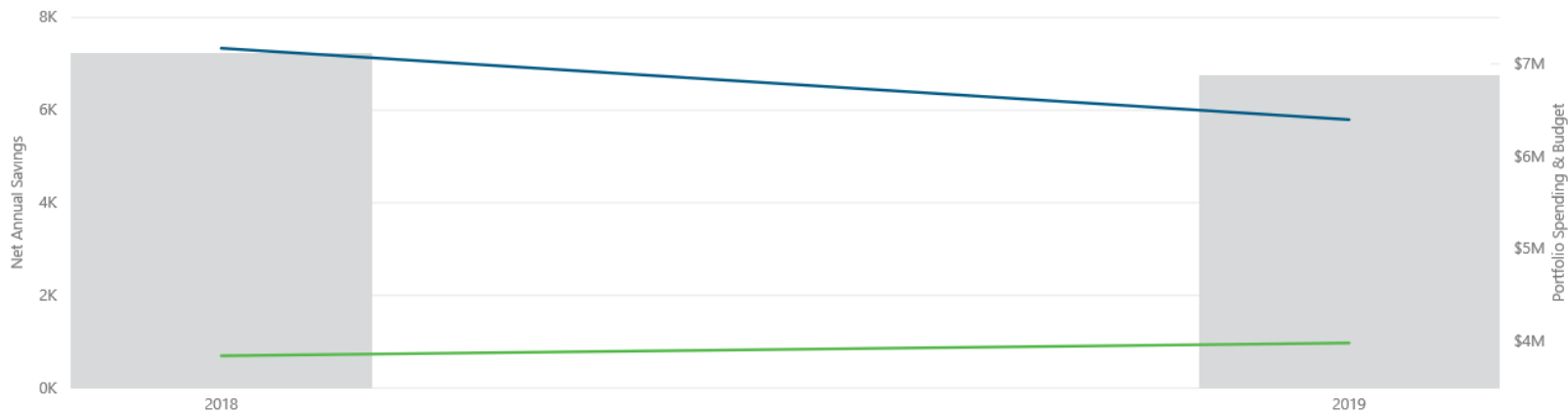


DEP Smart \$aver

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

Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	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%

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



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

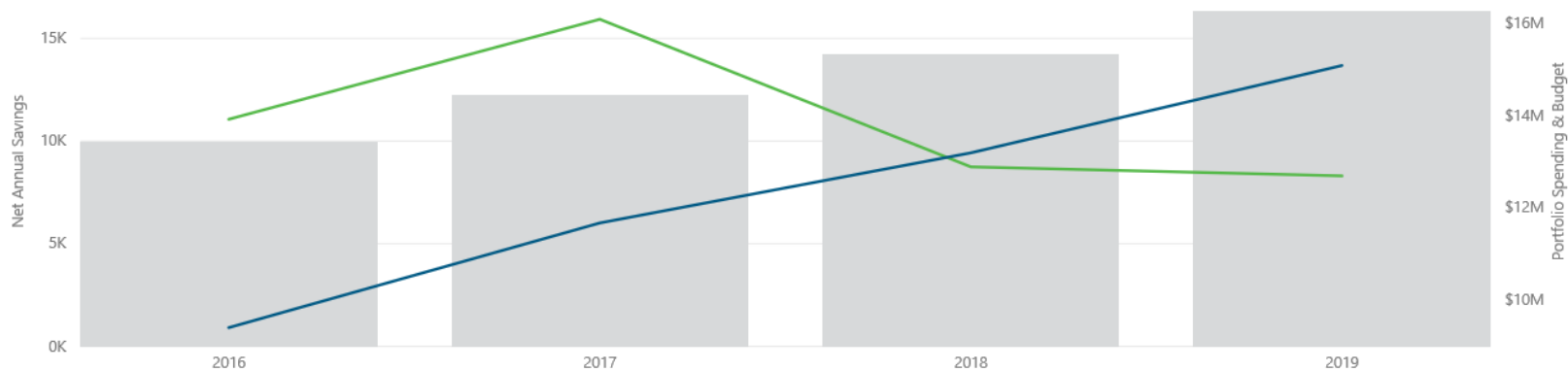
Measure Qty			
	DEP (NC)	DEP (SC)	Grand Total
2019	5941	2	5943

DEP Residential New Construction

Residential New Construction Program Budget, Savings & Number of Measures

Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	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

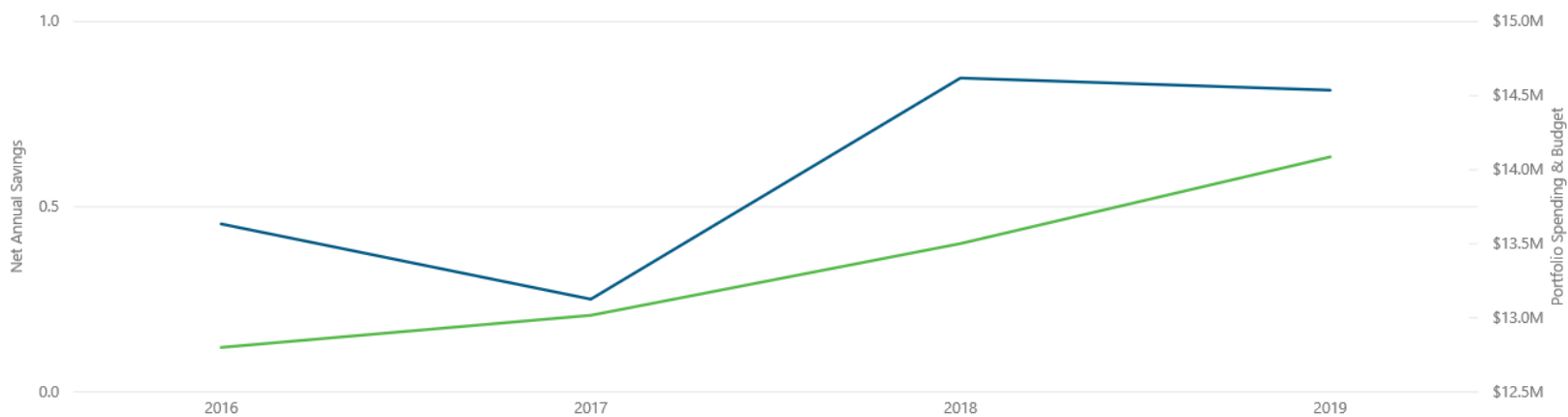
- 182,000 participants and full shed load impacts of 376 MW summer and 14.5 MW winter at the meter
- Bring Your Own Thermostat Program launched in mid-December—
 - DEC ~3,700 Customers, 5,400 devices
 - DEP ~2,900 Customers, 4,300 devices

DEP EnergyWise Home

EnergyWise Program Budget, Savings & Number of Measures

Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	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%

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



Power Manager

PowerManager¹

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

Notes on Tables:

1) Values are reflected at the system level.

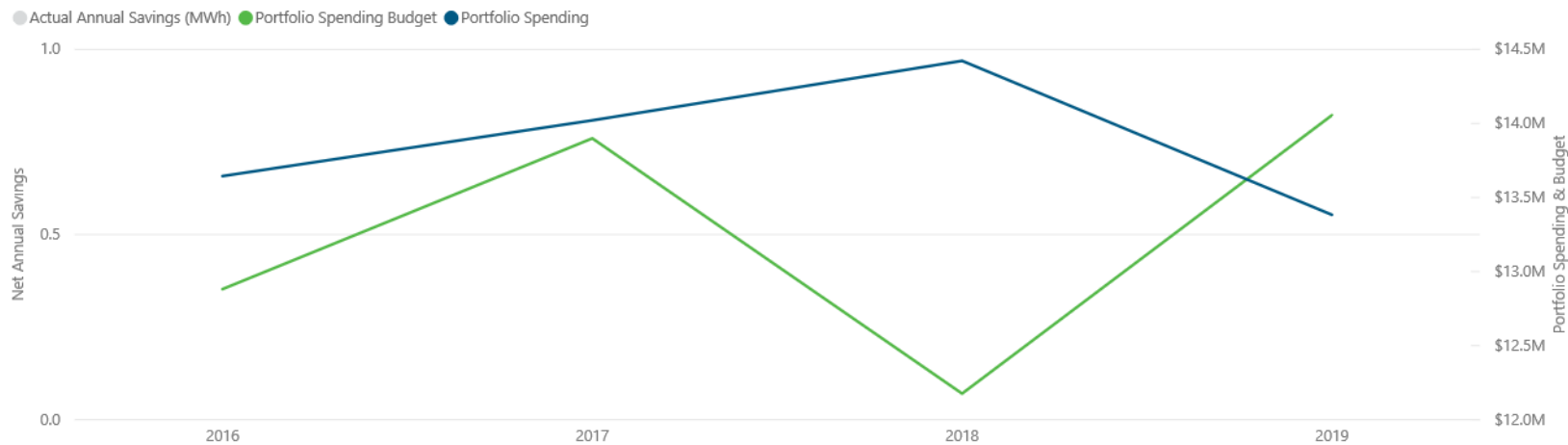
State & Type	
NC - CAN	216,490
SC - CAN	69,983
DEC - CAN	286,473
NC - Customers	180,513
SC - Customers	57,544
DEC - Customers	238,057

- 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
- 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

Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
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



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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		Prepare & Submit 2020 Full IRP 9/1		IRP Update	Full IRP with Basic ISOP Elements*
NC Clean Energy Plan Rec. A-1**	DEQ Stakeholder Working Group on CEP Rec. A-1 Policy Options				Report Submitted 12/31		
Integrated System & Operations Planning	Workshop #1	Webinars 1 & 2	Workshop #2/Final Report				
	Stakeholder Engagement			Develop and Refine ISOP Tools and Processes			

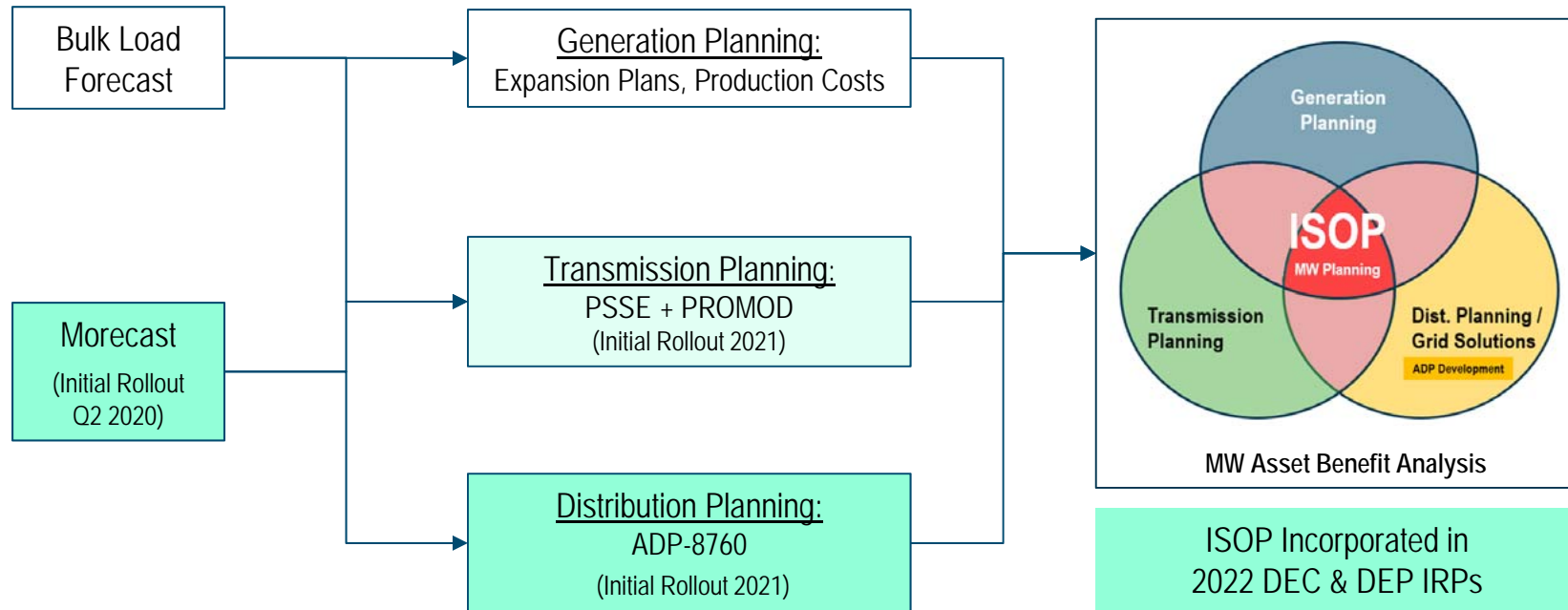
In-Progress Not Started

*Goal

**A-1 directs NC DEQ to develop a report on potential carbon reduction policies.

Privileged & Confidential/Attorney-Client Communication; Attorney Work Product; Prepared at the direction of counsel in anticipation of litigation

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>)

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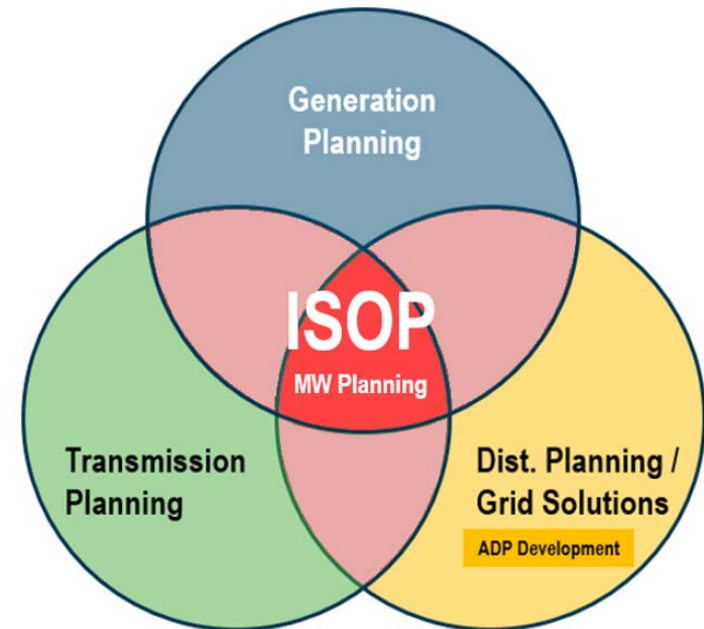
Non-traditional Solution Evaluations

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.*



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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 (NWA)

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.

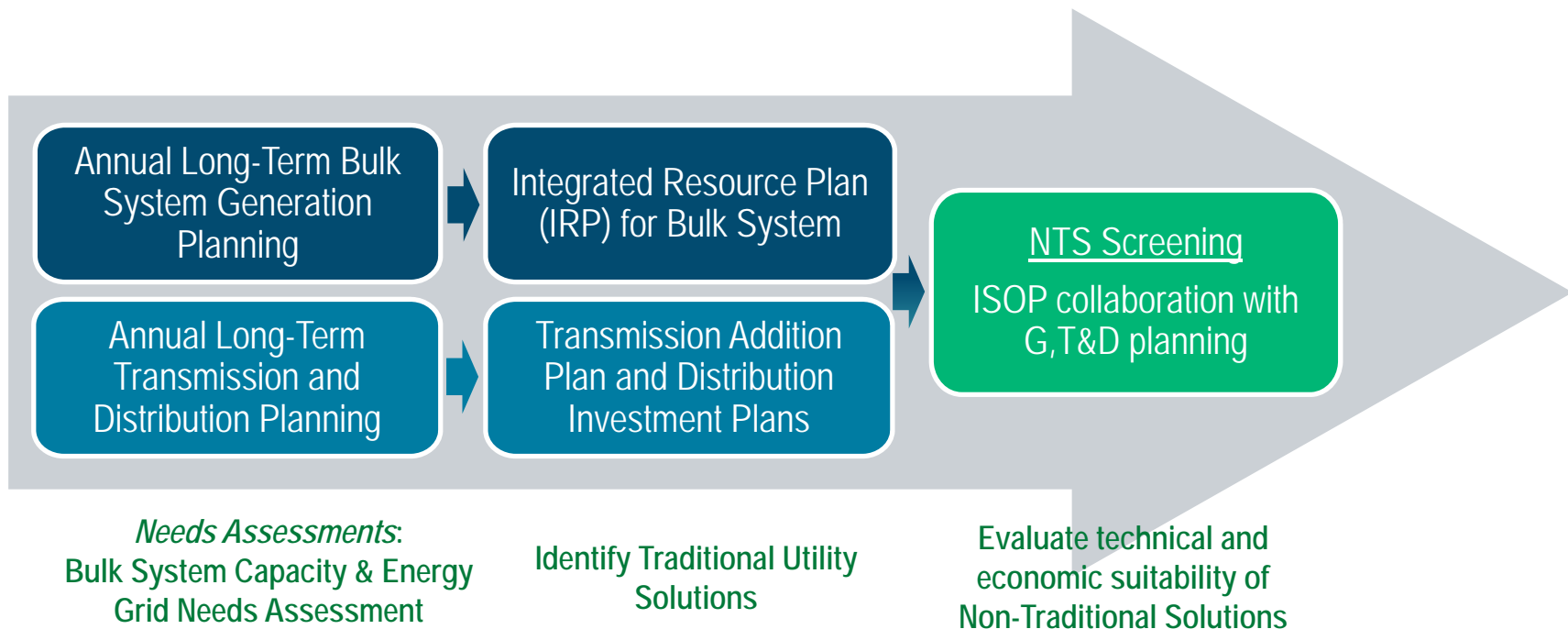
Some of the building blocks for NTS economic and technical potential screening assessments:

- 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

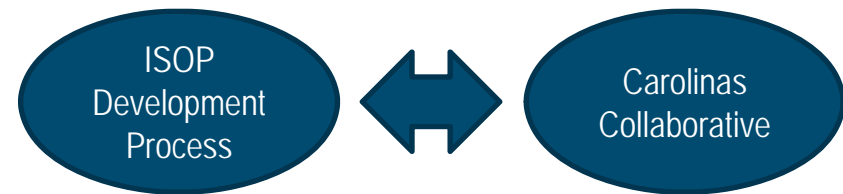
High-level NTS Screening



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

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?





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Non-Residential Program Updates



Prescriptive Programs

Small Business Energy Saver

Small Business Energy Saver¹

<i>\$ in millions, rounded</i>	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of 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%
Units²	61,700,000	51,421,356	83%

1) Values are reflected at the system level.

2) 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

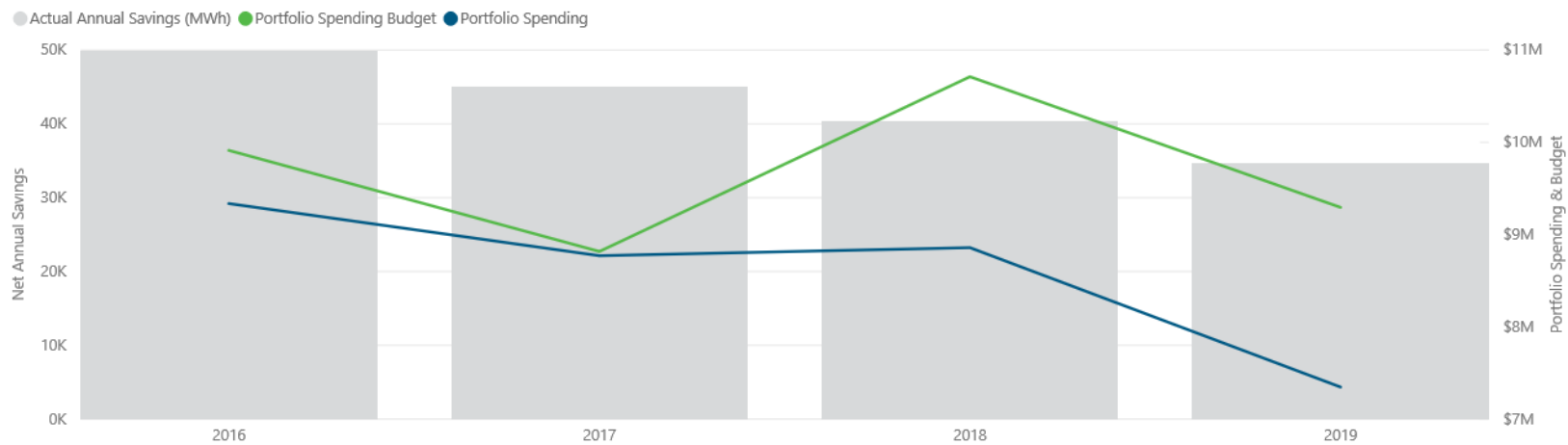
Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2017	\$17,505,451	\$17,350,972	99%	61,629	90,297	147%	12.84	17.26	134%	65,000,000	79,986,749	123%
2018	\$17,602,867	\$15,977,993	91%	93,136	76,697	82%	17.12	13.37	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

Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	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 Prescriptive¹

<i>\$ in millions, rounded</i>	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of 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%

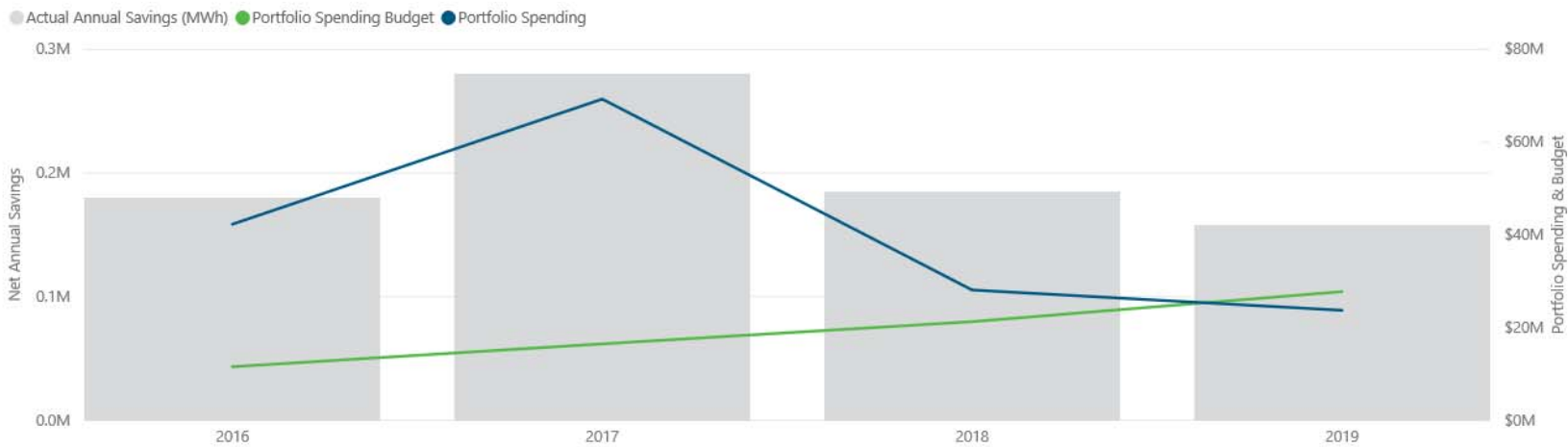
1) Values are reflected at the system level.

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 Saver Prescriptive

All Program Budget, Savings & Number of Measures

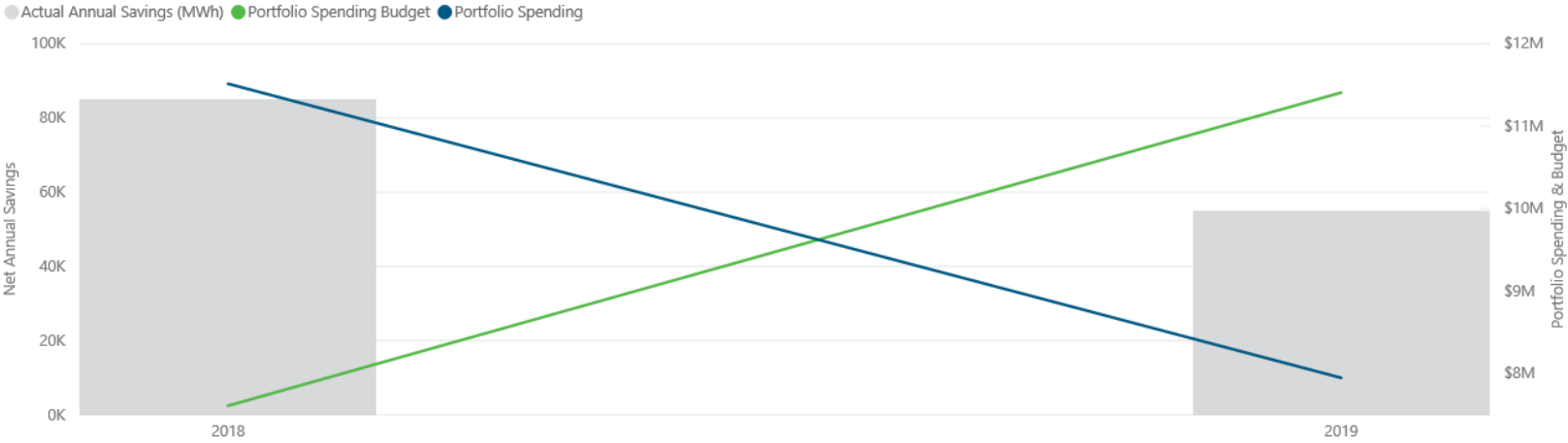
Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2019	\$27,756,994	\$23,730,040	85%	160,731	158,072	98%	23.64	29.97	127%	14,784,792	8,510,436	58%
2017	\$16,484,450	\$69,309,592	420%	87,299	280,372	321%	15.25	49.11	322%	381,368	5,323,913	1396%
2016	\$11,553,041	\$42,304,359	366%	105,657	179,738	170%	18.01	30.96	172%	2,165,635	5,159,447	238%
2018	\$21,277,469	\$28,110,902	132%	103,721	184,840	178%	14.90	33.00	222%	19,681,171	5,050,134	26%



DEP Smart \$aver Prescriptive

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

Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
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 Custom¹

<i>\$ in millions, rounded</i>	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of 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%

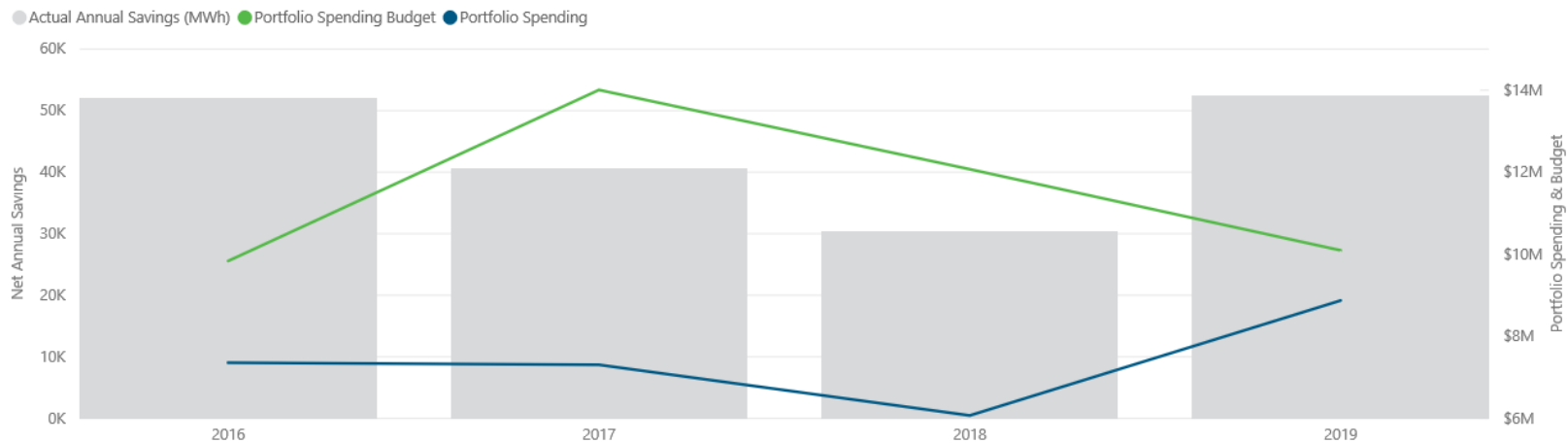
1) Values are reflected at the system level.

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 Saver Custom

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

Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	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%

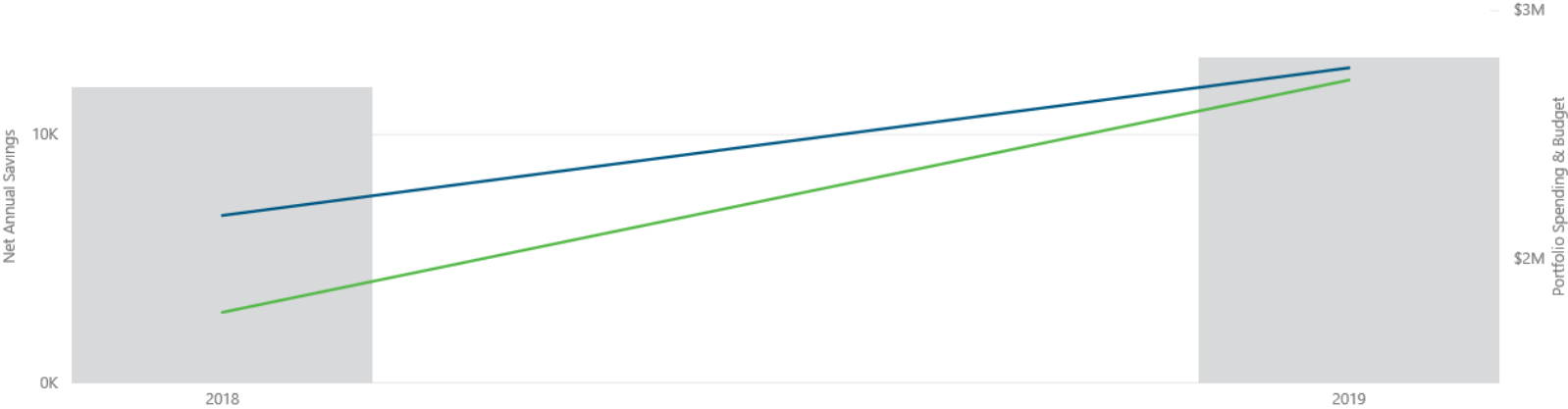


DEP Smart Saver Custom

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

Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	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



Custom Assessments

Non Residential Smart Saver Custom Technical Assessments¹

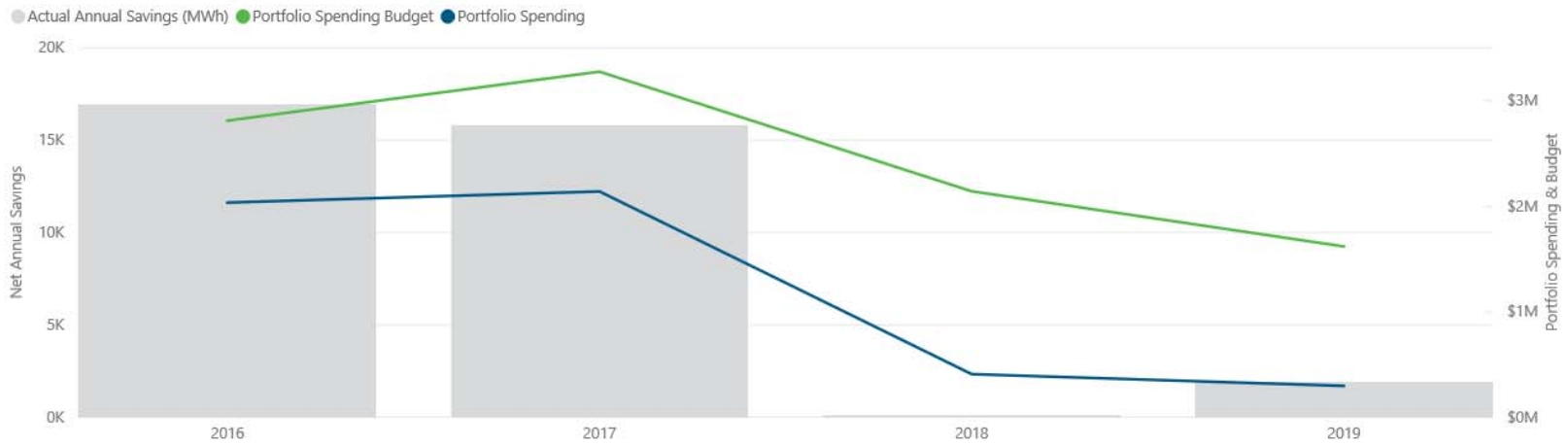
<i><u>\$ in millions, rounded</u></i>	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of Target
NPV of Avoided Cost	\$3.5	\$0.7	20%
Program Cost	\$1.6	\$0.3	18%
MW	1.0	0.1	15%
MWH	8,831.6	1,930.8	22%
Units	6,125	4	0%

1) Values are reflected at the system level.

DEC Custom Assessments

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

Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2018	\$2,141,618	\$407,293	19%	20,322	84	0%	2.32	0.01	1%	13,248	218	2%
2016	\$2,811,494	\$2,034,308	72%	17,529	16,953	97%	2.00	1.58	79%	14,202	199	1%
2017	\$3,276,235	\$2,139,875	65%	13,281	15,792	119%	1.52	1.63	107%	10,760	9	0%
2019	\$1,618,240	\$295,925	18%	8,832	1,931	22%	1.01	0.15	15%	6,125	4	0%



Performance Incentive

Non Residential Smart Saver Performance Incentive¹

<i>\$ in millions, rounded</i>	Vintage 2019 As Filed	Vintage 2019 YTD December 31, 2019	% of 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%

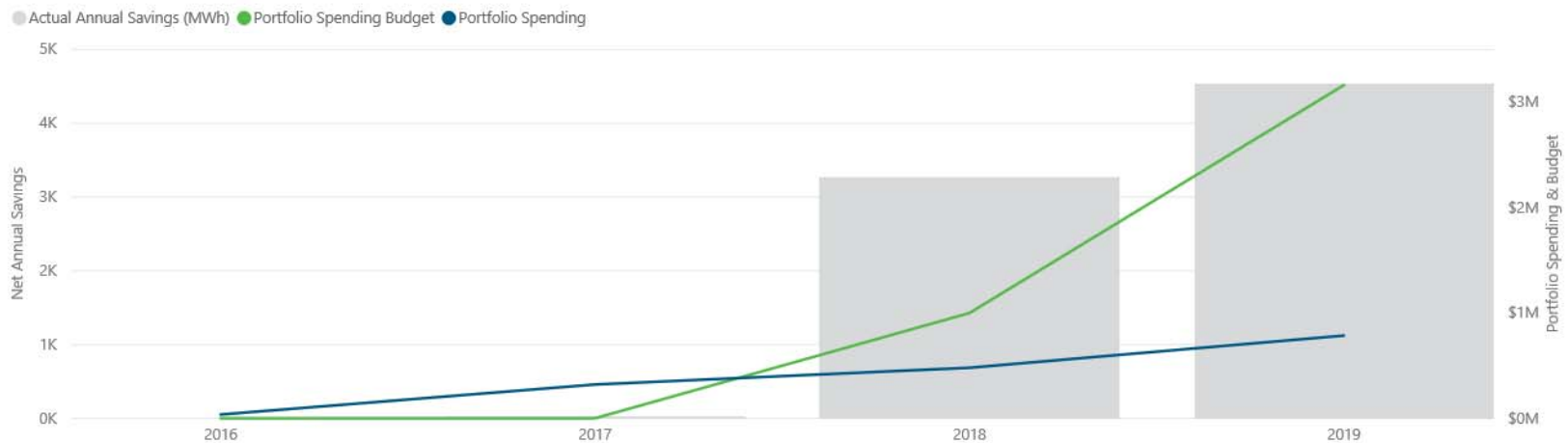
1) Values are reflected at the system level.

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

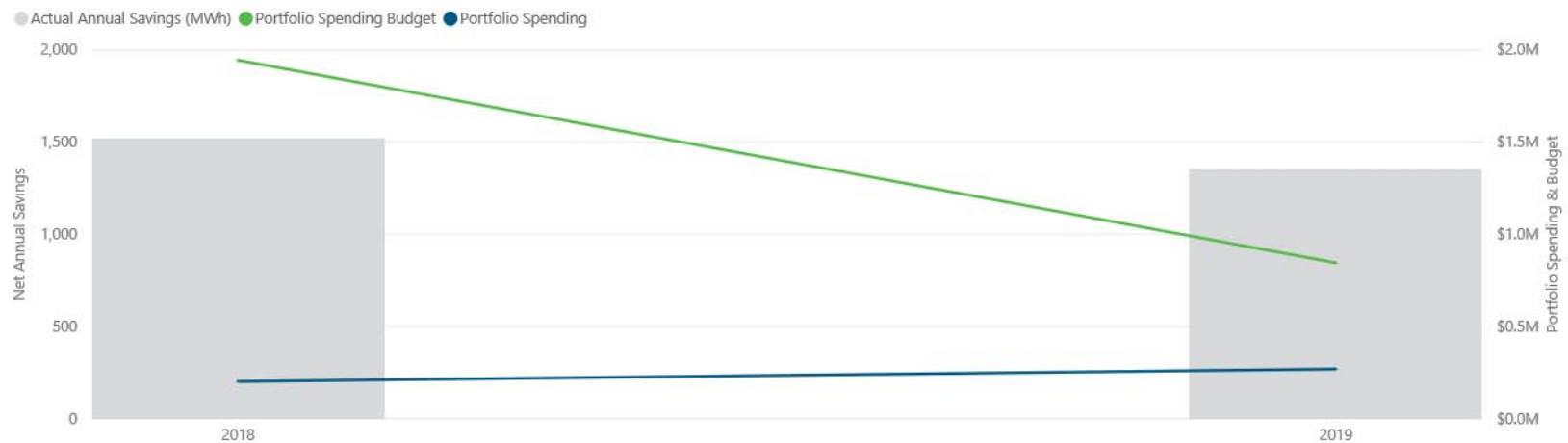
Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2018	\$998,804	\$479,610	48%	5,706	3,271	57%	0.65	0.17	26%	6,174,765	118	0%
2017	\$0	\$320,559	0%	0	12	0%	0.00	0.00	0%	0	19	0%
2019	\$3,162,160	\$784,949	25%	21,489	4,546	21%	2.45	0.39	16%	23,254,911	19	0%
2016	\$0	\$35,670	0%	0	0	0%	0.00	0.00	0%	0	0	0%



DEP Performance Incentive

Non-Residential SmartSaver Performance Program Budget, Savings & Number of Measures

Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	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%



Demand Response

EnergyWise Business

EnergyWise for Business¹

<i>\$ in millions, rounded</i>	Vintage 2019 As Filed ³	Vintage 2019 YTD December 31, 2019	% of 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%
Units²	19,023	15,053	79%

1) Values are reflected at the system level.

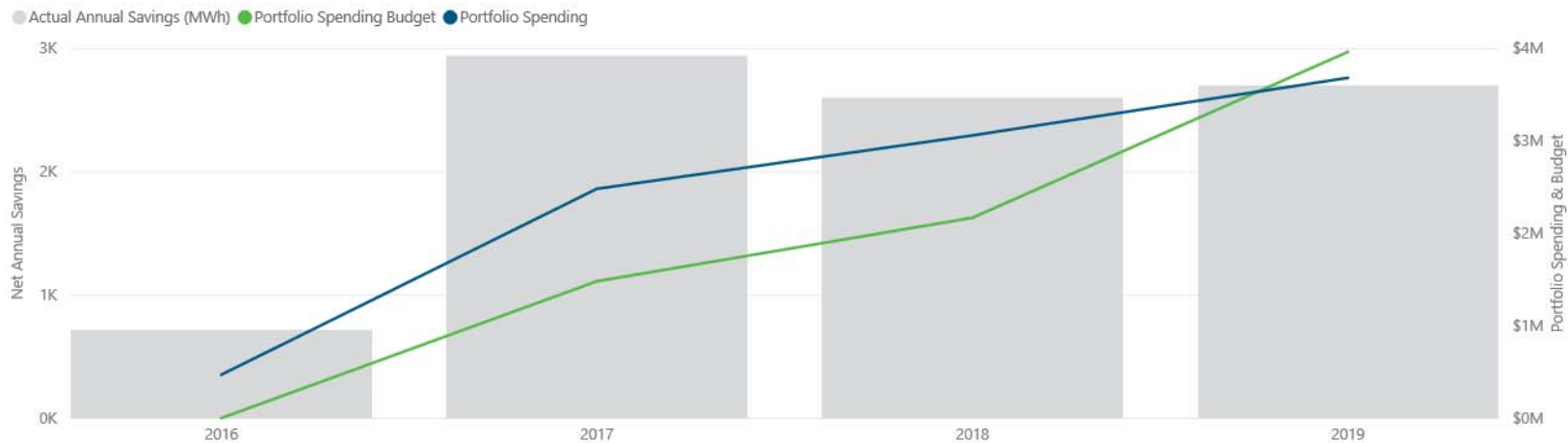
2) Units represent average monthly kW at meter for demand response measures (10,071), plus individual participants for smart thermostat energy efficiency measures (4,982).

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

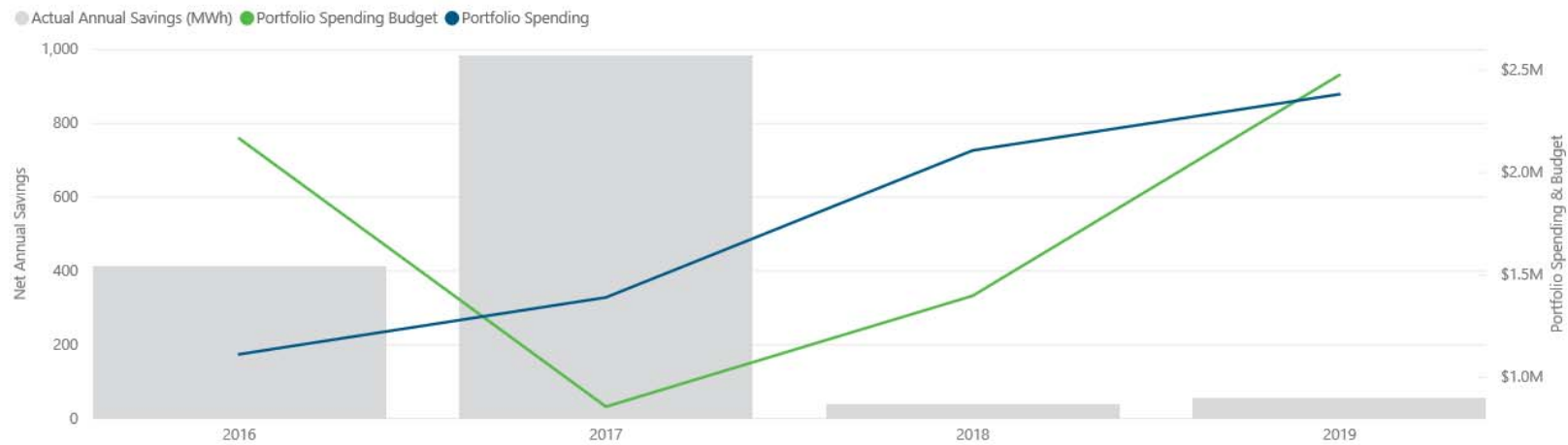
Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2019	\$3,967,504	\$3,686,451	93%	2,886	2,704	94%	16.66	11.60	70%	19,023	15,053	79%
2018	\$2,170,686	\$3,062,816	141%	3,530	2,600	74%	17.03	8.00	47%	6,863	11,505	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

Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2019	\$2,476,808	\$2,382,632	96%	1,537	55	4%	8.89	4.79	54%	6,750	7,460	111%
2018	\$1,398,553	\$2,108,030	151%	2,158	38	2%	10.54	2.66	25%	2,838	2,017	71%
2017	\$857,190	\$1,390,549	162%	986	984	100%	5.04	2.89	57%	1,896	1,664	88%
2016	\$2,166,386	\$1,112,815	51%	649	412	64%	1.55	0.52	34%	781	697	89%



PowerShare

PowerShare¹

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

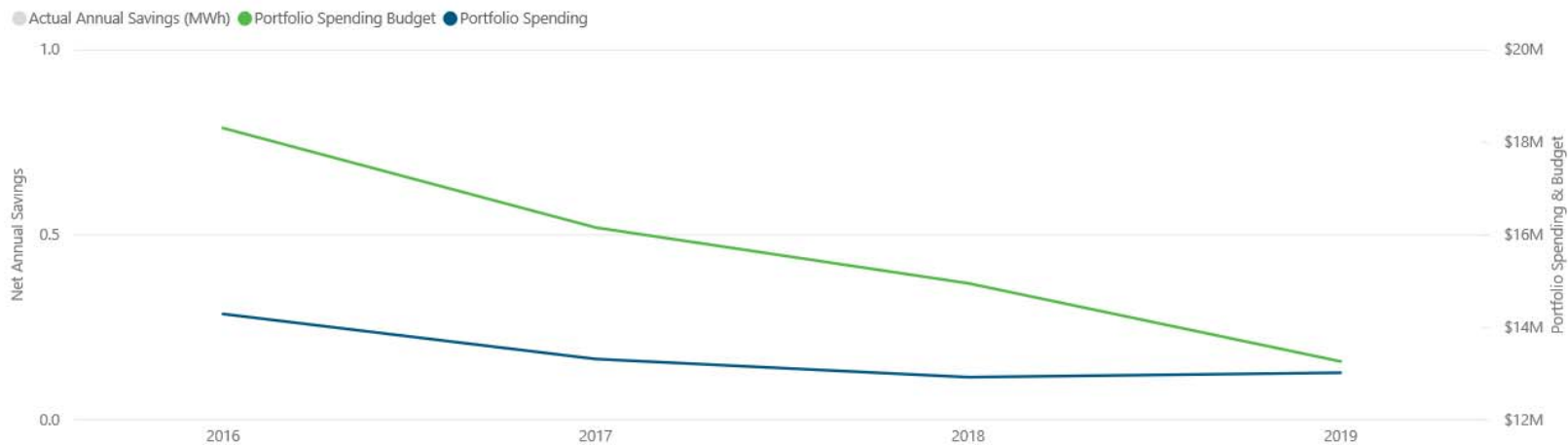
Notes on Tables:

- 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

Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	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%



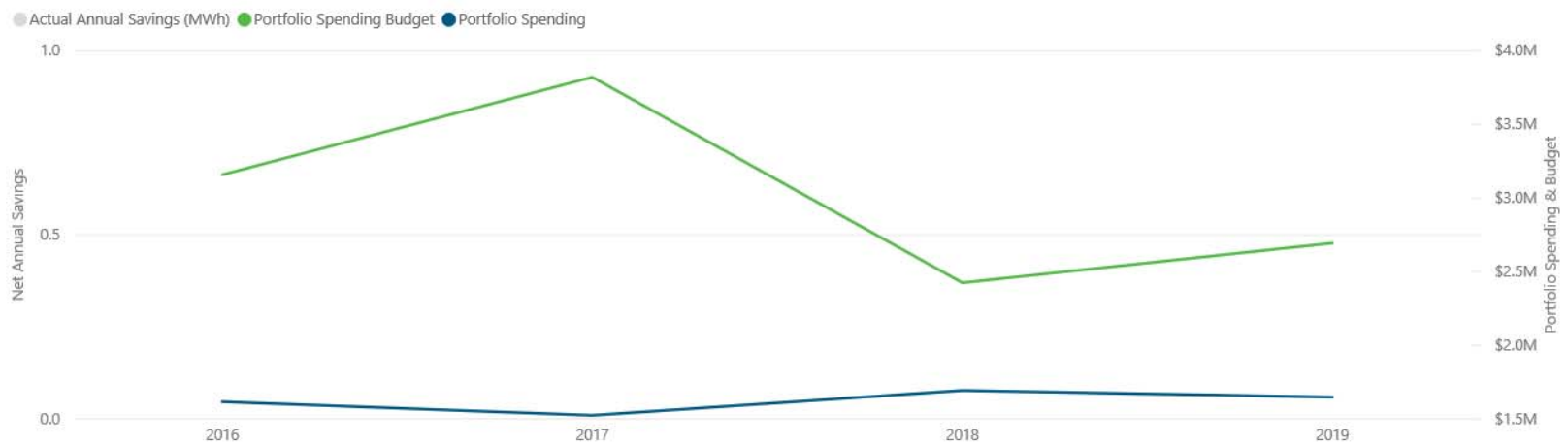
CIG DRA

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

Program Year	Expenditures			Energy Savings			Demand Savings			Participants		
	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
2019	\$2,694,260	\$1,647,027	61%	0	0	0%	7.36	2.57	35%	7,000	2,442	35%
2017	\$3,822,330	\$1,523,514	40%	0	0	0%	14.71	1.97	13%	14,000	1,873	13%
2018	\$2,424,856	\$1,692,473	70%	0	0	0%	7.36	1.63	22%	7,000	1,550	22%
2016	\$3,159,367	\$1,615,703	51%	0	0	0%	12.93	-5.34	-41%	12,300	0	0%





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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 2019	Food Service DEC	HVAC DEC	Food Service DEP	HVAC DEP
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



BUILDING A SMARTER ENERGY FUTURE®

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
 - 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

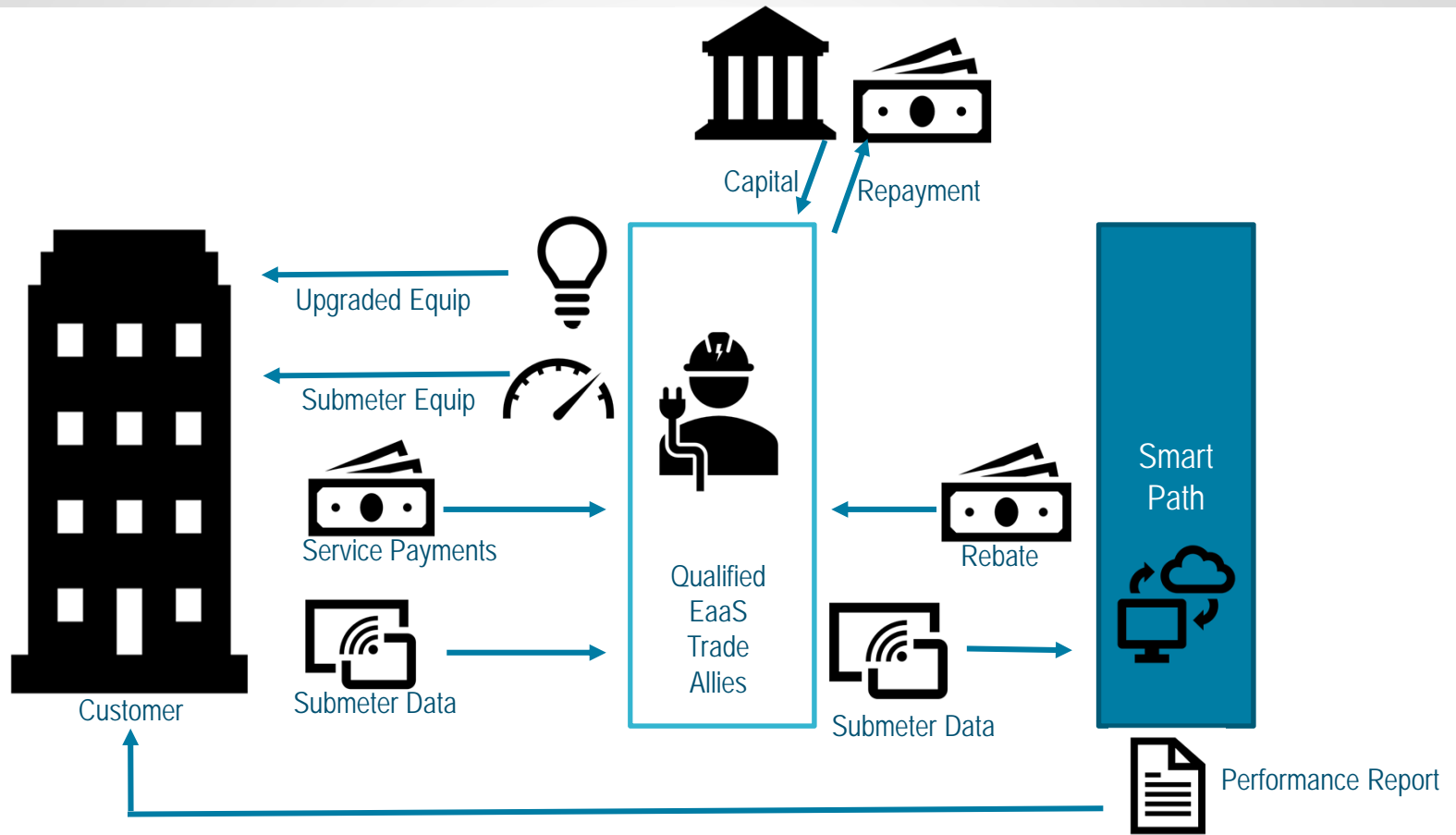
- March 9 – RFP issued
- March 19 – DEC/DEP Collaborative
- April 10 – program administrator proposals due
- April – SMB customer panel survey
- April/May – file updated Business Energy Saver tariff
 - Timing subject to the proposal pricing, and issues identified by bidders
- Summer - Program approval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

- 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
HVAC AC Optimization	Air conditioning only = Full tune-up (w/ refrigerant charge), VFD HVAC fans, Advanced RTU controls, EC motors 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
Lighting Day	all LED measures (retrofits & new fixtures, lamps) operating mostly within normal business hours (generally 6a - 7p)	15
Lighting Night	all LED measures (retrofits & new fixtures, lamps) operating mostly overnight	15
Existing Lighting w/ Controls 8760	lighting controls (connected or otherwise) added to existing lighting operating at least 8,040 hours per year (335 days, 24 hrs/day)	8
Existing Lighting w/ Controls Day	lighting controls (connected or otherwise) added to existing lighting operating mostly within normal business hours	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
3. 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**

