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REBUTTAL TESTIMONY OF

DAVID K. PICKLES

ON BEHALF OF

DOMINION ENERGY SOUTH CAROLINA, INC.

DOCKET NO. 2019-239-E

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND POSITION.

A. My name is David K. Pickles and my business address is 7160 North Dallas Parkway, Suite 340, Plano, Texas. I am a Senior Vice President with ICF Resources, LLC. ("ICF") and am testifying on behalf of Dominion Energy South Carolina, Inc. ("DESC" or the "Company").[1]

Q. HAVE YOU PREVIOUSLY SUBMITTED DIRECT TESTIMONY IN THIS PROCEEDING?

A. I have.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. The purpose of my rebuttal testimony is to describe why certain recommendations of witness George W. Evans, on behalf of the South Carolina Office of Regulatory Staff, and witness Elizabeth Chant, on behalf of South Carolina Coastal Conservation League, South Carolina NAACP, and Southern Alliance for Clean Energy, are inappropriate and should be rejected. Specifically,

[1] South Carolina Electric & Gas Company ("SCE&G") changed its name to Dominion Energy South Carolina in April 2019, as a result of the acquisition of SCANA Corporation by Dominion Energy, Inc. For consistency, I use "DESC" to refer to the Company both before and after this name change.

my rebuttal testimony will address the following recommendations and observations of these witnesses:

Mr. Evans

- The use of "Found Revenue" to offset "Lost Revenue;"
- The reduction in the Company's proposed shared savings incentive from 11.5% to 9.9%;

Ms. Chant

- The establishment of an energy savings goal for DESC of 1% of energy sales;
- Reliance on comparisons of historic achievement in other states to set future goals for DESC;
- Purported limitations in DESC's potential study;
- Various recommendations to add additional measures and programs to the DESC portfolio;
- The rejection of DESC's shared savings percent proposal;
- The introduction of a new sliding scale shared savings mechanism; and
- The sufficiency of DESC's analysis of demand response programs targeted at the winter peak.

Q. MR. EVANS RECOMMENDS THAT RECOVERY OF LOST REVENUES ASSOCIATED WITH ENERGY CONSERVATION MEASURES BE REDUCED BY "FOUND REVENUES". DO YOU AGREE WITH THIS RECOMMENDATION?

A. No. Mr. Evans' recommendation is inappropriate for three reasons:

1. Implementation of the recommendation would be inconsistent with, and indeed prohibited by law, specifically S.C. Code Ann. Section 58-37-20;
2. The recommendation is unjust in that it fails to recognize that, while DESC may receive "Found Revenues", such revenues have historically and appropriately been used to partially compensate the Company for "Found Costs;" and

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3. The recommendation has wide-ranging and significantly negative impacts on important public policy goals such as decarbonization, efficient use of the DESC system, and mitigation of future rate increases.

Q. PLEASE DISCUSS WHY IMPLEMENTATION OF THE RECOMMENDATION WOULD BE INCONSISTENT WITH, AND PROHIBITED BY, S.C. CODE ANN. SECTION 58-37-20.

A. Mr. Evans' recommendation requires that "any increases in revenues resulting from any new activity by the company that causes a net increase in any customer's demand or energy consumption"[2] be used to reduce the recovery of Lost Revenues and reduce the Rate Rider. However, the full recovery of Lost Revenues (without any reduction for "Found Revenues") is a necessary component of cost recovery in order to be compliant with S.C. Code Ann. Section 58-37-20. Specifically, the Code requires that the Public Service Commission establish rates and charges that:

> …ensure that the net income of an electrical or gas utility regulated by the commission after implementation of specific cost-effective energy conservation measures is at least as high as the net income would have been if the energy conservation measures had not been implemented.

Absent implementation of the energy conservation measures, all "Found Revenues" would be available to the Company to offset costs and thereby contribute to net income. The adoption of Mr. Evans' recommendation would, by definition, reduce the Company's net income relative to that which would have

[2] Direct Testimony of George W. Evans, Page 18, Line 17.

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been earned in the absence of the energy conservation measures, and is therefore not appropriate.

Q. PLEASE DISCUSS WHY IMPLEMENTATION OF THE RECOMMENDATION WOULD BE UNJUST.

A. Under current ratemaking policies, if the Company makes investments in activities that increase sales, the Company is entitled to benefit from those sales to help offset the costs of such investments until such time as a rate case incorporates the costs into base rates and all customers benefit from the larger sales base over which to spread fixed costs. In contrast, Mr. Evans' proposal would have revenues associated with "any new activity by the Company"[3] precluded from recovery, despite the fact that such activities may have associated "Found Costs." Examples of such activities may include economic development programs, line extensions, meter sets for new construction, support of electric vehicle charging infrastructure, and other activities – all of which provide significant benefits to DESC's customers and all of which would be significantly less attractive to the Company under Mr. Evans' proposal. To significantly change long-established rate making practice by prohibiting the Company from using Found Revenues to offset Found Costs (at least until the next rate case) would be unjust.

Q. PLEASE DISCUSS WHY IMPLEMENTATION OF MR. EVANS' "FOUND REVENUE" RECOMMENDATION WOULD BE IN CONFLICT WITH IMPORTANT PUBLIC POLICY GOALS.

[3] Ibid, Page 18, Line 18.

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A. Mr. Evans' recommendation would reduce DESC's incentive to pursue any activity that increases sales. However, increasing sales in a targeted and managed manner is necessary to further at least three important public policy goals.

First, in order to make significant progress in decarbonizing the U.S. economy, the transportation sector (which contributed 29% of total U.S. greenhouse gas emissions in 2017[4]) will need to shift from high carbon gasoline and diesel fuels towards (comparatively) low carbon electricity. This need has been recognized by more than 42 utilities across the United States who have adopted programs to support electrification of the transportation sector. Similarly, programs supporting managed shifts away from fossil fuels for space and water heating in certain climates, or electrification of certain industrial processes, materials handling equipment such as forklifts, and other beneficial electrification applications have been developed by more than 16 utilities nationwide. While DESC is still evaluating its role in the evolving trend towards decarbonization, it is clear that adoption of Mr. Evans' recommendation regarding Found Revenues would have a significant chilling effect on the Company's incentive to invest in programs that reduce net carbon emissions.

Second, Mr. Evans' Found Revenue recommendation would dampen the Company's incentive to increase off-peak sales. Increasing off-peak sales in a cost-effective manner is an important policy goal in that it increases the efficiency of use of the Company's system (i.e., increases the system load factor), provides a

[4] Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990–2017, U.S. EPA, June, 2019.

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larger sales base over which to spread fixed costs, and can put downward pressure on average rate levels thereby postponing the need for future rate increases.

Third, Mr. Evans' Found Revenue recommendation would reduce the Company's incentive to pursue economic development and other marketing activities. While such activities may increase system sales, they can also put downward pressure on rates and support other important public policy objectives such as the creation of new jobs and increasing the economic output of the service territory.

For these important public policy reasons, as well as the unjust nature of the cost recovery impacts and the prohibitions set forth in the South Carolina Code of Laws, I recommend rejection of Mr. Evans' recommendation regarding Found Revenue.

Q. MR. EVANS RECOMMENDS THAT THE SHARED SAVINGS INCENTIVE BE REDUCED TO 9.9% OF NET BENEFITS INSTEAD OF THE 11.5% PROPOSED BY DESC. DO YOU SUPPORT THIS REDUCTION?

A. No. Mr. Evans avers that this reduction is appropriate because "the Company's proposed energy savings do not rise to the level achieved by other South Carolina utilities, and the Company's proposed suite of programs is not comparable to the other South Carolina utilities."[5] There are two problems with this argument.

[5] Ibid, Page 17, Line11.

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First, the legal standard for the sufficiency of the incentive set forth in S.C. Code Ann. Section 58-37-20 does not include comparison to the programs or savings achievement of other utilities. Instead, the sole standard for determining the appropriateness of the incentive is that it "ensure that the net income of an electrical or gas utility regulated by the commission after implementation of specific cost-effective energy conservation measures is at least as high as the net income would have been if the energy conservation measures had not been implemented." The Company has calculated that the net income that DESC would otherwise earn on the 115.5 MW of capacity saved by the proposed portfolio is $5,597,280[6]. This amount is equivalent to a shared savings percent of 11.4% (the Company's 11.5% proposal yields a shared savings incentive of $5,650,000.) The code does not provide the flexibility to reduce the incentive to any amount below that necessary to sustain the Company's net income – no matter the level of performance relative to other utilities.

Second, the inference that the Company's performance is somehow inferior relative to DEP or DEC just because the count of programs is lower or the proposed level of *future* energy savings is lower than other utilities' *historic* achievements is misleading. For example, although, as noted in Mr. Evans' Exhibit GWE-2, DESC proposes 7 residential programs in comparison to DEP's 13 programs, DEP includes in its count a load control program (which would not be cost effective for

[6] Assumes a $5,478,360,110 retail ratebase as of 6/30/2019, a 4.99% after tax weighted cost of equity, $273,370,169 estimated net income for return, 5,641 MW summer capacity estimate, yielding $48,461net income per MW. With the programs providing 115.5 MW Savings over PY10-PY14, the lost net income is $5,597,280.

DESC at this time), a new construction program (which as discussed later is not appropriate for DESC), and two pilot programs (which DESC does not count). Similarly, although DESC has "only" 3 commercial and industrial programs and DEP and DEC have 7 and 13 programs respectively, DESC's programs offer many of the same measures and services (where they would be cost-effective) within its 3 programs. DESC simply chooses to offer them as comprehensive programs with a broad range of measures - simplifying the customer experience and reducing delivery costs. In short, a major source of distinction is in how the programs are marketed, not the scope of the programs.

Further, although DESC's proposed future programs save less energy as a percentage of sales than (for example) DEC's achievements in 2018, no inference about the appropriateness of the programs or savings can be made based on such comparisons alone. Certain measures available to DEC in 2018 will not be cost-effective for DESC in the future due to changes in codes and standards. In addition, the DEC service territory has different customer demographics, rates, trade ally infrastructure, avoided costs, and other factors that influence the appropriateness of the savings and program types. To simply assert that what has been right for DEC and DEP in the past is right for DESC in the future without detailed analysis and demonstration of cost-effectiveness is inappropriate.

Since Mr. Evans proposed reduction in the shared savings percentage is not supported by the South Carolina Code of Laws, and since Mr. Evans assertion that DESC's proposed programs are somehow inferior to those of other South Carolina utilities is not supported by the facts and ignores the many differences in economic

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and policy drivers between the utilities, I recommend that the Commission reject Mr. Evans recommendation to reduce the share savings percentage to 9.9%.

Q. MS. CHANT RECOMMENDS THAT THE COMMISSION REQUIRE DESC TO RAMP UP TO ANNUAL SAVINGS EQUAL TO ONE PERCENT OF TOTAL ANNUAL SALES BY THE END OF YEAR 5. DO YOU AGREE WITH THIS RECOMMENDATION?

A. No. Ms. Chant asserts that the 1% goal is appropriate based on:

- A comparison to historical (and in my opinion unrepresentative) achievements of other states as reported by ACEEE;
- Her curiosity regarding the ramp rate reflected in DESC projections (which already reflect a doubling of the incremental energy saving rate);
- A purported (and in my opinion inaccurate and unsubstantiated) series of limitations of DESC's Potential Study; and
- Comparisons to the programs of DEC and DEP, and to a series of (in my opinion unrepresentative) potential studies conducted for other utilities in other states.

Below, I will address each of these items separately. However, it is important to first note that in order to implement any expansion of DESC's programs, the Company (and indeed any party that would have DESC expand its programs) is under an affirmative obligation to demonstrate the cost-effectiveness of such expansion. South Carolina Code Section 58-37-20 provides that:

> The South Carolina Public Service Commission may adopt procedures that encourage electrical utilities and public utilities providing gas services subject to the jurisdiction of the commission to invest in **cost-effective** energy efficient technologies and energy conservation programs. If adopted, these procedures must: provide incentives and cost recovery for energy suppliers and distributors who invest in energy supply and end-use technologies that are **cost-effective**, environmentally acceptable, and reduce energy consumption or demand; allow energy suppliers and distributors to recover costs and obtain a reasonable rate of return on their

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> investment in qualified demand-side management programs sufficient to make these programs at least as financially attractive as construction of new generating facilities. (emphasis added)

Ms. Chant's testimony at no point provides any evidence that increasing the goal to 1% would be cost-effective and, therefore, cannot justify the recommended increase.

Q. MS. CHANT OPINES THAT "DESC IS EXPERIENCED AND THE PROGRAMS ARE MATURE. AS SUCH, DESC SHOULD BE DELIVERING SAVINGS LEVELS OVER 1 PERCENT."[7] DO YOU AGREE?

A. No. I believe the standard for determining the appropriate level of energy savings is much more complex, quantitative, and nuanced that the "experience and maturity" standard offered by Ms. Chant. As noted previously, South Carolina law requires that the programs be cost effective. Further, I believe that the operational and capacity needs of the system, the demographics of the customer base, the affordability impacts of the programs, the nature of the energy efficiency and trade ally infrastructure, changes in technology and baselines, and other important public policy considerations should all be considered when determining savings goals. All of these factors were taken into account by DESC in developing the proposed programs.

Q. DOES THE ACEEE 2018 STATE ENERGY EFFICIENCY SCORECARD CITED BY MS. CHANT PROVIDE EVIDENCE THAT DESC SHOULD ACHIEVE SAVINGS OF 1% AS PERCENTAGE OF SALES?

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[7] Direct Testimony of Elizabeth Chant, Page 6, Line 2.

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A. No. The ACEEE study reports 2017 statewide energy efficiency savings as a percentage of 2016 statewide energy sales. As noted by Ms. Chant, 13 states report energy savings above 1%. However, 37 states and the District of Columbia all report savings less than 1% - and Commissions in those states presumably determined those lower savings levels to be appropriate given the unique situation in each state.

Further, the savings achieved in other states in 2017 provides only limited insight into the appropriate savings for DESC in 2024. Many of the measures driving high savings levels in 2017 (especially lighting measures) will no longer be available or cost-effective for DESC in 2024 due to changes in codes, standards, and baselines, making extrapolation of achievement between 2017 and 2024 inappropriate.

In addition, authorities in the "Above 1%" states made a policy choice to spend large amounts of ratepayer money on their energy efficiency programs. As illustrated in Table 1, the expenditure by these states averages 3.68% of annual statewide revenues even before the additional recovery of lost revenues which further increases rates.

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Table 1. Comparison of Energy Efficiency Savings and Expenditure by State[8]

	State	Energy Savings as % Sales	EE Spend as % Revenue
1	Vermont	3.33%	8.02%
2	Rhode Island	3.08%	6.81%
3	Massachusetts	2.57%	7.04%
4	California†	1.97%	3.61%
5	Connecticut	1.62%	3.08%
6	Michigan	1.48%	1.91%
7	Hawaii†	1.45%	0.92%
8	Washington†	1.35%	4.13%
9	Illinois	1.34%	2.64%
10	Arizona†	1.33%	1.31%
11	Minnesota†	1.31%	2.48%
12	Oregon†	1.21%	3.79%
13	New York	1.17%	2.10%
	Average		**3.68%**

Additional potential differences between other states and South Carolina include:

- the cost-effectiveness test used (e.g., several of the Above 1% states use the Societal or Utility Cost Test to determine cost-effectiveness, both of which generally pass more energy efficiency than does this Commission's approved TRC test);
- the treatment of free-riders and the calculation of net-to-gross ratios (several of the Above 1% states report gross savings which are then converted by ACEEE into net numbers using an assumed net-to-gross ratio). Note that DESC's proposed gross savings in 2024 is 0.87% of sales;
- the weather in the state in question, which significantly impacts the energy savings;
- rate levels, which influence customer payback and thereby influence adoption rates and savings;
- local codes and standards;

[8] Source: The 2018 State Energy Efficiency Scorecard, ACEEE, Tables 8 and 12. † Indicates the savings data are reported as gross and adjusted to net using an assumed .856 NTGR.

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- saturation of natural gas, oil, and propane equipment;
- customer demographics and income; and
- the ability of large customers to opt-out of the programs.

Taken as a whole, the limitations associated with the historical ACEEE data make it an inappropriate basis for establishing a prospective energy savings goal for DESC.

Q. IN SUPPORT OF HER CLAIM THAT DESC'S MORE THAN DOUBLING OF THE ENERGY SAVINGS GOAL IS "INSUFFICIENT,"[9] MS. CHANT EXPRESSES CURIOSITY AS TO WHY DESC'S SAVINGS REACH A PLATEAU INSTEAD OF CONTINUING TO EXPAND EACH YEAR[10]. IS THIS PLATEAU EVIDENCE THAT A GOAL OF 1% IS APPROPRIATE?

A. No. The plateau is largely due to anticipated changes in federal standards. Specifically, standards related to lighting, and heating and cooling. While the precise timing of the changes in lighting standards in uncertain, the most recent information suggests that relevant lighting efficiency standards will not change until mid-2021, with a sell-through period (the period during which retailers may sell existing stocks) of 18 months. This results in a decrease in savings for lighting programs in 2023, with a decrease in achievable savings in direct installation programs in 2025. Further, in 2023 the federal minimum energy performance standard for cooling increases from SEER 14 to SEER 15 and will have a large impact on residential heating and cooling programs. The plateau therefore

[9] Direct Testimony of Elizabeth Chant, Page 7, Line 1.
[10] Ibid, Page 7, Line 3.

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appropriately reflects a decrease in savings expected to come from the affected measures.

Q. MS. CHANT ASSERTS THAT THERE ARE LIMITATIONS ASSOCIATED WITH DESC'S POTENTIAL STUDY THAT JUSTIFY INCREASING THE GOAL TO 1%. DO YOU AGREE?

A. No. Ms. Chant cites the following purported limitations:

- Limitation of future performance of the programs based on consideration of historic program performance;
- Use of payback acceptance curves to estimate program participation;
- Overlooking certain measures and program types; and
- Estimation of potential that is lower than the potential estimated for other utilities in other states.

I will address each of these criticisms in turn below. However, it should again be noted that Ms. Chant offers no quantitative analysis of the supposed limitations, nor of how "correction" of the limitations would impact the cost effectiveness of any measure or program and how much additional savings would be gained.

Q. MS. CHANT SUPPORTS MANY OF HER CRITICISMS WITH CITATIONS TO A REPORT FROM THE REGULATORY ASSISTANCE PROJECT (RAP). DID THE RAP REPORT INCLUDE A SPECIFIC REVIEW OF THE DESC POTENTIAL STUDY?

A. No. The RAP report was completed in 2012 and does not include any analysis of the DESC potential study at issue in this filing. While the RAP report does identify certain "pitfalls" to consider when developing potential studies, Ms. Chant fails to recognize where the DESC potential study was structured to avoid

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many of the cited pitfalls, or where the potential pitfall is not relevant to the DESC study.

Q. MS. CHANT APPEARS TO BELIEVE THAT DESC'S CONSIDERATION OF PAST PROGRAM PERFORMANCE HAS INAPPROPRIATELY CONSTRAINED ESTIMATION OF FUTURE PROGRAM PERFORMANCE. DO YOU AGREE?

A. No. I believe that consideration of past program performance is one appropriate element of future program development – especially where the utility will be reliant upon the estimated future capacity savings to ensure reliable service and satisfaction of reserve margin obligations. Importantly, the DESC potential study did not consider past program performance solely when assessing future programs. Had DESC done so, the future programs would look very much like past programs, and not the expansion in scope and more than doubling of impact as currently proposed.

In addition to analyzing expansion of historic programs within a range believed to be reasonable based on the experience of staff currently delivering the programs, the future energy savings estimates were informed by primary research conducted in DESC's service area, and benchmarking of similar programs. Further, the Potential Study included assessment of 454 potential measure types and 13 separate program designs.

Q. MS. CHANT CITES DESC'S USE OF PAYBACK ACCEPTANCE CURVES AS A LIMITATION OF THE POTENTIAL STUDY. WHAT IS A PAYBACK ACCEPTANCE CURVE?

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A. A payback acceptance curve is a graph showing the relationship between different payback periods (i.e., the number of years it takes for a customer to recoup their investment) and the percentage of customers who will make an investment at each payback period. For example, 80% of residential customers may make an investment if it has a payback of 2 years, but only 20% will make that investment if it has a payback of 6.5 years. Payback acceptance curves are commonly used in the energy efficiency industry as one input into the development of energy efficiency programs.

Q. DOES MS. CHANT ACCURATELY CHARACTERIZE DESC'S USE OF PAYBACK ACCEPTANCE CURVES IN THE POTENTIAL STUDY?

A. No. Ms. Chant implies that the Potential Study uses *only* Payback Acceptance curves when estimating program potential[11]. She goes on to say that, "[w]hile payback is one metric that customers look at, it is not the only factor important to customer acceptance rates."[12] I would agree with this last statement, which is why (contrary to Ms. Chant's implication) the Potential Study considered additional factors when forecasting participation. As discussed in the "Program Assumptions" section of the Potential Study, participation rates were developed using:

- Primary research conducted by Opinion Dynamics Corporation in DESC's service area on customer market barriers and acceptance rates at different incentive levels;
- Benchmarking of similar programs;

[11] Ibid, Page 9, Lines 11-13.
[12] Ibid, Page 9, Lines 13-14

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- Payback acceptance rates; and
- ICF expert input.

This represents an appropriate balancing of the various techniques used to forecast program adoption, and does not rely excessively on Payback Acceptance curves. Further, it is my experience that customer payback acceptance relationships have not changed significantly since the curves were developed and they remain appropriate for use today.

Q. MS. CHANT ASSERTS THAT THE POTENTIAL STUDY OVERLOOKS CERTAIN PROGRAMS AND MEASURES. DO YOU AGREE?

A. No. Ms. Chant identifies seven "purported barriers that could be overcome to expand potential of the programs."[13] However, these barriers have all been previously considered by DESC, and Ms. Chant's characterization of these barriers – and the opportunities their removal might create – is either inaccurate, inappropriate, or insignificant. Again, Ms. Chant provides no empirical evidence of those barriers, and no quantitative analysis of the impact on participation or cost-effectiveness of her recommendations. The barriers Ms. Chant identifies are discussed below, and include:

- A concern that the Municipal LED program anticipates participation by 50% of the target market by Year 5 (instead of the 100% participation rate recommended by Ms. Chant);
- A lack of upstream programming (which, although a valuable tool in some jurisdictions, has pros and cons that DESC carefully considered and – supported by input from local trade allies including distributors and contractors – chose not to pursue at this time);

[13] Ibid, Page 11, Lines 6-7.

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- An (inaccurate) assertion that there is very little proposed growth in offerings to the C&I market;
- An assertion that trade allies are not leveraged in the delivery of upstream programs (which they would not be, when, as is the case here, DESC chooses not to pursue upstream programming);
- A recommended doubling of growth in the low-income program (without any discussion of why such a doubling would be achievable, cost-effective, or appropriate);
- A recommended expansion of the measures and growth rate in the Home Energy Check-up ("HEC") program (similarly without any analysis); and
- The lack of a residential new construction program (which DESC has offered previously, and which, based on DESC's experience and analysis, would not be appropriate and cost-effective given the level of new home construction and current baselines).

Q. WHY IS 50% OF THE AVAILABLE MUNICIPAL LED MARKET IN FIVE YEARS A REASONABLE PARTICIPATION ESTIMATE?

A. As mentioned in Ms. Griffin's testimony, the proposed Municipal LED Program targets replacing approximately 54,000 non-LED fixtures across the system for an initial target of 15 to 17 municipalities over the next 3-5 years. Within the Potential Study Model, ICF and DESC were hesitant to take credit for full implementation of more than 50% of the Municipal LED since it is quite possible that, over time, this market may move to adopt LEDs on its own as pricing becomes more competitive. If LED prices were to drop significantly, this would eliminate the need for DESC incentives to encourage the installation of high efficiency fixtures. DESC plans to monitor this situation closely, update the DSM Advisory Group, and currently anticipates that it will continue to offer incentives as long as doing so is needed to influence the decision-making process. Note that the system will continue to benefit from adoptions of LEDs after that point, but will not be

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required to pay for it with customer incentives. This issue was explored during meetings with the Advisory Group and DESC took from those conversations that this approach was believed to be reasonable.

Q. WAS UPSTREAM PROGRAMMING CONSIDERED BY DESC?

A. Yes. Upstream programming (i.e., the payment of incentives to manufacturers/distributors instead of customers/local trade allies) was actively considered, but ultimately not selected. While upstream programs have some benefits, those benefits can come at the expense of:

- A distancing of the program from the customer, making it more difficult to communicate with the customer regarding appropriate installation and use of the equipment;
- A loss in visibility for the sponsoring utility, making it less likely the customer is aware of the utility's sponsorship of the program (increasing the likelihood that customers do not feel they are getting value from the programs despite contributing to their cost);
- Debate regarding the influence of the incentive in the purchasing decisions of distributors, leading to a potential decline in the net-to-gross ratio and reduction in program cost-effectiveness; and
- A potential for "leakage" of rebated measures outside the service territory unless accompanied by qualification and tracking procedures sometimes resisted by distributors and manufacturers.

Further, as part of the extensive local market research done during the potential study, DESC hosted focus group meetings with distributors and contractors in order to explore the concept of upstream programs. The feedback from distributors and contractors was decisively against the idea of an upstream program.

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DESC will continue to consider upstream programs for future filings, but does not believe they are appropriate for DESC, its trade allies, and its customers at this time.

Q. IS THERE VERY LITTLE GROWTH IN PARTICIPATION IN THE C&I PROGRAMS AS SUGGESTED BY MS. CHANT?

A. I would not characterize it that way. The expanded programs do in fact show significant growth during the five-year plan, and also show growth in comparison to current programs. As indicated in the plan, the EnergyWise for Your Business (EWfYB) program shows an average increase in savings across the 5 years over 12% in Net MWh savings. As compared to the results from PY7, which is the latest data available prior to the plan development, the EWfYB PY10 forecast indicates an increase of over 34% in terms of Net MWh savings and over 17% in project participation rates.

Similarly, as indicated in the plan, the Small Business Energy Solutions program shows an average increase in savings across the 5 years of over 20% in Net MWh savings and over 4% in project participation rates. As compared to the results from PY7, which is the latest data available prior to the plan development, the PY10 forecast indicates an increase of over 33% in Net MWh savings and over 13% in project participation rates.

Further, while retaining the names of the programs may not indicate expansion, the offerings within those programs have been considerably expanded. As discussed in the study, the EWfYB includes a new agricultural offering and a Strategic Energy Management offering targeted towards industrial customers. Both

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the EWfYB and the small business programs include higher incentives for customers.

DESC has worked closely with its trade allies over the past 8 years to explore how the programs are operating and how they can be expanded. The growth forecasts provided in the plan are, in part, informed by direct communication with these allies.

Q. IS THERE LIMITED GROWTH IN THE LOW INCOME PROGRAM?

A. No. While the five-year plan indicates over 1% of participation in growth year over year, the number of participants reached in PY10 is over 136% of the participants reached in PY7. The growth is replicated in the savings achieved in PY10 as compared to PY7.

Q. IS THERE LIMITED GROWTH IN THE HOME ENERGY CHECK-UP PROGRAM?

A. No. The number of participants reached in PY10 is over 125% of the participants reached in PY7. Further, with the expansion of the program to include the direct installation of LED light bulbs and water savings measures, as well as the introduction of "Tier 2" measures, the program is forecasted to achieve over 270% of the net savings achieved in PY7 by the HEC program.

Q. WAS A RESIDENTIAL NEW CONSTRUCTION PROGRAM CONSIDERED?

A. Yes. DESC operated a Residential New Construction program during Program Years 1-4 and used its experience to inform its consideration. The success of this program was limited, in large part due to naturally occurring high-efficiency

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baselines, a low net-to-gross ratio based on the lack of influencing builder's decision making process. Given the relatively low number of new home starts each year in the DESC service territory, the fragmented nature of the new home builder market, the current and rising baselines of new homes and the resultant downward pressure on savings, and the program costs associated with creating the necessary builder interest, DESC believes there is limited opportunity for the program at this time. Further, given that this program provides opportunities for only a small number of customers to participate, and given DESC's objective of expanding services to low-income customers, existing homes and small businesses, DESC chose not to pursue this program at this time.

Q. MS. CHANT ASSERTS THAT "ESTIMATING THE ACHIEVABLE POTENTIAL IN TEN YEARS AT LESS THAN WHAT A UTILITY OPERATING IN THE SAME STATE HAS ALREADY ACHIEVED SEEMS TO BE SETTING MUCH TOO LOW A BAR."[14] DO YOU AGREE?

A. No. Ms. Chant asserts that DEC's 2017 energy savings of more than 1 percent somehow suggests that DESC's 2024 energy savings should also be more than 1 percent. As discussed previously, there are several flaws in this logic.

First, DEC's past savings are, in part, achieved with measures and programs that are no longer available or will not be cost-effective in 2024. DESC's potential study took this factor into account when establishing its proposed savings.

[14] Ibid. Page 14, Lines 7-9

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Second, Ms. Chant has made no showing that increasing the goal from 0.7 percent to 1 percent would be cost-effective for DESC, as required by South Carolina Law.

Third, Ms. Chant's recommendation requires that we ignore the fact that some key drivers of energy efficiency differ between DEC and DESC, including:

- Average rates;
- Avoided costs;
- Saturation of natural gas;
- Low-Income customer proportion; and
- Service territory density.

While the achievements of truly comparable peer utilities can be one potential "touchstone" when considering energy savings for like time periods, one cannot conclude that DESC's savings is "much too low" without further analysis – which Ms. Chant has not provided.

Q. MS. CHANT AVERS THAT BENCHMARKING TO OTHER POTENTIAL STUDIES (FIGURE 23 IN DESC'S POTENTIAL STUDY) INDICATES THAT DESC'S FORECASTS ARE UNDERESTIMATED.[15] DO YOU AGREE?

A. No. This figure as used in Ms. Chant's testimony, without the context provided in DESC's Potential Study is misleading. While several of the studies in the figure cited by Ms. Chant show savings higher than those proposed by DESC, it is important to note that most of those estimates represent the "high" case from

[15] Ibid. Page 15, Line 4.

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the potential studies and may be unachievable or unsupported by policy goals. And, while these estimates may have been created, they were not necessarily rigorously vetted in a contested case proceeding nor adopted as appropriate goals by the utility's regulators.

Further, DESC's Potential Study goes on to explain that "the reference class studies all include earlier time periods less impacted by federal minimum energy performance standards for general light bulbs (EISA 2007); therefore, the results of the reference class studies likely include much more savings from standard screw-in LEDs and CFLs than this study. Further, some of the studies, including those performed by ACEEE, were conducted in part using "top-down" methods (i.e., extrapolating experience in other jurisdictions), making the results less comparable to this study, which was developed using "bottom-up" methods" (i.e., estimating participation based on the unique measures, customers, economic drivers, and other factors unique to the utility). Given this additional context, I would disagree that these benchmarks suggest DESC's goals are inappropriate.

Q. MS. CHANT RECOMMENDS THAT SEVERAL STEPS BE TAKEN TO EXPAND THE BENEFITS OF ENERGY EFFICIENCY TO LOW INCOME CUSTOMERS. DO YOU CONCUR WITH HER RECOMMENDATIONS?

A. DESC agrees that expanding the services to low-income customers is important, and has done so with its proposed programs. While it would perhaps be possible (although not necessarily prudent) to spend more, DESC believes it has appropriately balanced providing expanded services to low-income customers with also offering programs to its other customers. Ms. Chant recommends that:

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- The list of measures included be expanded (however, her list of additional measures includes measures already in the portfolio, or measures shown not to be cost-effective);
- New manufactured homes be added to the program (despite severe limitations associated with this addition); and
- The eligibility criteria be relaxed.

Each of these recommendations is addressed below.

Q. HOW DO YOU RESPOND TO MS. CHANT'S LIST OF RECOMMENDED ADDITIONAL MEASURES?

A. I would note that almost all Ms. Chant's proposed measures are included in the DESC portfolio, although not always with the very high customer subsidy implicit in the low-income program. Ms. Chant's recommendations, and my responses (*in italics*), are below:

- Include all electrically heated homes. *Electrically heated homes are a priority in the plan, and as such, the Residential HVAC measure incentives have been increased and revised to include additional incentives for the replacement of electric resistance heat;*
- Add air sealing. *This is included within the "Tier 2" measures for Home Energy Checkup and NEEP for Mobile Homes;*
- Add duct sealing. *This is included as part of the Residential Heating & Cooling and Water Heating Program and NEEP for Mobile Homes;*
- Add attic insulation. *This is included within the "Tier 2" measures for Home Energy Checkup and NEEP for Mobile Homes;*
- Add reflective roof coating. *This is included within the "Tier 2" measures for Home Energy Checkup and NEEP for Mobile Homes;*
- Add programmable Wi-Fi thermostats. *This is included within the "Tier 2" measures for Home Energy Checkup, NEEP for Mobile Homes and On-Line Store;*
- Add duct blaster testing. *This may take place as part of the installation of "Tier 2" measures in the Home Energy Checkup program and NEEP for Mobile Homes;*

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- Add refrigerator replacement. *The evaluated measure level TRC for a refrigerator replacement in DESC service territory is 0.59;*
- Add air source heat pump replacing electric resistance heat and central air-conditioning. *This is included as part of the Residential Heating & Cooling and Water Heating Program; and*
- Add heat pump water heating replacing electric resistance water heating. *This is included as part of the Residential Heating & Cooling and Water Heating Program.*

In addition to the above reasons, since no cost-effectiveness results, program budget implications, or energy savings estimates have been provided, I recommend rejection of all Ms. Chant's additional measure recommendations.

Q. SHOULD THE ELIGIBILITY CRITERIA BE REVISED FOR "SMALL BUSINESSES"?

A. No. By keeping the eligibility criteria as it is now (350 MWh annual usage or less), the smallest and most disadvantaged businesses can be targeted and reached using available program funds. Expansion of the eligibility criteria would result in larger business that are capable of taking action in the EnergyWise for Your Business program, taking incentive money away from smaller business that are more in need of the assistance. Further, DESC has increased the amount of incentives available on a per participant basis (increase from 80% of cost to 90% of cost) in order to recruit more participants.

Q. PLEASE SUMMARIZE MS. CHANT'S RECOMMENDATIONS WITH RESPECT TO THE SHARED SAVINGS INCENTIVE.

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A. Ms. Chant asserts that DESC's proposed shared savings percent of 11.5% is "too high"[16] and results in "excessive compensation."[17] She goes on to indicate that she would tend to support a higher level of shared savings if it were "conditional on achieving more ambitious goals."[18] Finally, she recommends a sliding scale sharing of the net benefits, which would be a function of the annual energy savings achieved.

Q. DO YOU AGREE THAT DESC'S PROPOSED SAVINGS PERCENTAGE IS "TOO HIGH" OR "EXCESSIVE"?

A. No. Ms. Chant seems to misunderstand the legislative authority that requires that a shareholder incentive be made available to DESC, and bases her opinion that the proposed incentive is "too high" without consideration of "too high relative to what?" Making the same mistake as Mr. Evans, Ms. Chant ignores the provisions of S.C. Code Ann. Section 58-37-20, which requires that the Commission:

> …ensure that the net income of an electrical or gas utility regulated by the commission after implementation of specific cost-effective energy conservation measures is at least as high as the net income would have been if the energy conservation measures had not been implemented.

The determination as to whether or not the Company's proposal is appropriate therefore requires comparison to the net income that would have occurred in the absence of the programs. As noted previously, this amount is $5,597,280 and is equivalent to a shared savings percent of 11.4%. Note that there

[16] Ibid. Page 27, Line 19.
[17] Ibid, Page 28, Line 8.
[18] Ibid, Page 28, Line 11-12

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is no authority to offer a lower incentive, nor any opportunity to make it conditional based on the achievement of more aggressive goals.

Since DESC has proposed a shared savings percent that results in net income that is almost exactly equal to that which would occur if the Company were not to implement the programs, it is *by definition* neither "too high" nor "excessive".

Q. ARE THERE ADDITIONAL PROBLEMS ASSOCIATED WITH MS. CHANT'S PROPOSED SLIDING SCALE MECHANISM?

A. Yes. Ms. Chant recommends that the incentive only accrue when savings are at or beyond 0.8 percent of sales[19] (including sales to opt-out customers despite the fact that DESC is precluded from offering programs to such customers[20]). Since the potential study does not identify cost effective savings at this level, no incentive would ever be earned. This is clearly confiscatory and contrary to state law.

Ms. Chant also asserts that her proposal "provides motivation for the program administrator to continue to push its performance to higher and higher levels, rather than just meeting a minimum threshold and stopping its efforts for improvement of results."[21] However, as noted above, the real impact of Ms. Chant's proposal would be to reduce DESC's shareholder incentive to zero and eliminate DESC's incentive for offering energy efficiency programs at all.

It should be noted that, as proposed, DESC's mechanism already provides all the motivation necessary for DESC to push performance to higher levels. The

[19] Ibid, Page 29, Lines 2-3.
[20] Ibid, Page 30, Lines 11-12
[21] Ibid, Page 29, Lines 11-13

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"shared savings" structure intrinsically drives DESC to cost-effectively increase savings (even if those savings are in excess of the goal or "minimum threshold") and to decrease costs. And it does so without the arbitrary and punitive thresholds proposed by Ms. Chant.

Q. DO YOU BELIEVE THAT DESC HAS COMPLIED WITH THE COMMISSION'S DIRECTIVE AND ORDER IN DOCKET NO. 2018-2-E TO DEVELOP AND IMPLEMENT DEMAND RESPONSE PROGRAMS TO REDUCE WINTER PEAK?

A. Yes. DESC developed winter peak demand response programs and evaluated them for cost-effectiveness. The programs evaluated included a Time-of-Use ("TOU") rate program and a Direct Load Control ("DLC") program, which included: residential electric heating load control devices; residential electric water heating load control devices; commercial electric space heating load control devices; and commercial electric water heating load control devices. The measures and programs were targeted towards controlling winter peak demand reduction and neither of the programs proved to be cost-effective. DESC seeks to implement only cost-effective DR programs and therefore neither of these programs were proposed for implementation at this time.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes. This concludes my rebuttal testimony.

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