

Analysis of the Duke Energy Demand-Side Management and Energy Efficiency Incentive Mechanism

Prepared by:



STRATEGEN

Prepared for:



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1. Introduction

The North Carolina Utilities Commission ("Commission") recently filed an Order Requesting Comments on Duke Energy Progress' ("DEP") and Duke Energy Carolinas' ("DEC", together "Duke") demand-side management and energy efficiency performance incentive mechanism ("DSM and EE Mechanism"). The Commission is requesting comments on the following:

- i. Whether incentives in the Commission-approved Mechanism are producing significant DSM and EE results;
- ii. Whether the customer rate impacts from the DSM/EE rider are reasonable and appropriate;
- iii. Whether overall portfolio performance targets should be adopted; and
- iv. Any other relevant issues.

Strategen Consulting was retained by the North Carolina Attorney General's Office ("AGO") to conduct a technical evaluation of Duke's DSM and EE Mechanism. Strategen studied the mechanisms and compared Duke's achieved savings, incentives, and ratepayer impacts to those experienced in other states.

This memorandum outlines the current mechanisms used by DEC and DEP to recover program costs and incentives for Energy Efficiency and Demand-Side Management Programs. The memorandum discusses three areas of concern:

First, Duke does not have a DSM/EE savings target. Savings targets are a critical component of a holistic DSM/EE mechanism.

Second, multiple tools are used in the DSM/EE mechanism to compensate Duke for costs of DSM/EE programs and to provide incentives for Duke to offer such programs. The multiple layers of compensation and generous component design add up to create an overly costly mechanism. The DSM/EE mechanism needs to be tailored so that the incentives are better aligned with performance. By setting targets and rewarding Duke when high-performance is achieved, the incentives would be more cost effective for ratepayers.

Third, the cost-effectiveness tests that are used to evaluate DSM/EE programs should be updated so that the avoided costs used in the evaluations account for the time value of energy

efficiency, as opposed to focusing on summer peaks. In addition, the Commission should create a cost-effectiveness test that accounts for the costs associated with fossil-fuel emissions for informational purposes.

2. Recommendations

Strategen makes the following recommendations to the Commission:

Savings Target

- The Commission should set an explicit savings target. The savings target could be informed by a DSM/EE potential study or informed by comparable states savings targets. Based on Strategen's analysis a retail sales performance target with the trajectory shown below would be reasonable.¹

	2021	2022	2023
Duke Energy Carolinas	1.40%	1.70%	2.00%
Duke Energy Progress	1.20%	1.60%	2.00%

DUKE DSM/EE MECHANISM

- Given that Duke is generously compensated by the Net Lost Revenues recovered under the mechanism, the Commission should consider restructuring the financial incentive to better align utility compensation with performance. Specifically, the Commission should consider changing the threshold point where savings begin to be shared with the utility. For example, the utility should only begin to share in savings once it has achieved or reached a threshold of 75% of the savings target.

¹ As in the targets for the Renewable Energy and Energy Efficiency Portfolio Standard, the target could be based on the incremental savings percentage relative to the utility's prior year's system retail electricity sales.

COST-EFFECTIVENESS TESTS

- The Commission should improve the current methodologies used to calculate the Utilities Cost Test (“UCT”) and Total Resource Cost (“TRC”) test.
 - Specifically, the Commission should require Duke to improve avoided cost calculations by more granularly accounting for the time value of energy efficiency.
- The Commission should create a cost-effectiveness test that incorporates the estimated cost of emissions for informational purposes.

3. The Duke DSM/EE Mechanism Results in North Carolina

According to Duke, in 2018 Duke Energy Carolinas (“DEC”) achieved incremental energy savings of 1.33% of its retail sales, while Duke Energy Progress (“DEP”) achieved 0.91%.² Duke reported the historical savings of DSM/EE mechanisms as shown below.

	2015	2016	2017	2018
Duke Energy Carolinas	0.87%	1.16%	1.40%	1.33%
Duke Energy Progress	1.08%	1.02%	1.02%	0.91%

Based on these reported savings levels, DEC’s DSM/EE programs appear to be providing significant results (i.e. above average) when compared to other utility’s and state-level energy savings metrics.³ However, DEP’s DSM/EE programs appear to perform at an average level when compared to the same metric.⁴

² The incremental energy savings in 2018 and historical savings from the DSM/EE mechanisms were reported in response to Public Staff Data Request 2-6.

³ See Relf et al., 2017. The 2017 Utility Energy Efficiency Scorecard. Available at <https://aceee.org/research-report/u1707> See also Berg et al., 2018. The State Energy Efficiency Scorecard. Available at <https://aceee.org/research-report/u1808> Note that ACEEE has Duke NC saving significantly lower than those reported by the Company. At least part of the difference is explained by the net to gross factor that ACEEE applies to the energy savings estimates reported by Duke.

⁴ Id.

As indicated in the Commission's request for comment in this docket, results, in the form of annual savings, are an important component of the DSM/EE mechanism review. While Duke is achieving average or above-average results, there are multiple components of the DSM/EE mechanism that must be analyzed in concert to determine whether the results are reasonable. The following sections assess other components of the DSM/EE mechanism to determine whether the results being achieved by Duke are reasonable given the incentives and regulatory treatments approved by the Commission.

4. Savings Target

Savings targets may be the single most influential component of DSM/EE mechanisms.⁵ Duke does not have to meet an explicit energy savings target.

Savings targets are important for at least two reasons. First, a savings target helps define performance and informs overall mechanism design. The purpose of creating a financial performance incentive is to reward high achievement. Without a savings target to demarcate good or high achievement, the DSM/EE mechanism lacks clarity and does not provide a benchmark from which it may be designed.

Second, a savings target holds the utility accountable. Failing to meet a Commission's explicit target may reflect poor responsiveness to public policy goals. How Duke is perceived by the public is important to the Company. For this reason alone, a savings target should lead to better performance from the utility.

Savings targets can be set based on a number of factors. One factor that can inform a savings target is a potential study. Potential studies investigate the market size, as well as the technical and economic potential of feasible DSM/EE measures in a region.⁶ Savings targets can also be

⁵ Nowak et al. 2015. Beyond Carrots for Utilities: A National Review of Performance Incentives for Energy Efficiency. Available at <https://aceee.org/research-report/u1504>

⁶ Duke had a DSM/EE potential study conducted in 2016, according to AGO Information Response 3-1. Given that the study is three years old, an updated study should be used to inform any future savings targets.

informed by what other states have committed to and been able to achieve. According to the 2018 ACEEE scorecard, there are states with aggressive targets higher than 2.5% (MA, RI, AZ), seven states have savings targets higher than or equal to 2%, while 14 states have set targets below 2% but higher or equal to 1%.⁷ A qualitative assessment of states' targets indicates that 1% targets appear to be low bars, with 1.5% being moderate, and over 2% being more aggressive.

While Duke does not have to meet an explicit savings target, it does have to comply with the Renewable Energy and Energy Efficiency Resource Standard ("REPS"). REPS require utilities to meet an increasing amount of their customers' retail sales needs by a combination of renewable energy resources and reduced energy consumption. REPS may function in some similar ways to an Energy Efficiency Resource Standard ("EERS"), as it allows energy efficiency and conservation measures to meet renewable targets, but differs in a very important way: it does not set a minimum required level for DSM/EE. Thus, the REPS may not be as effective in encouraging cost-effective energy conservation as a more direct DSM/EE requirement. Furthermore, under the NCUC's final rules, there are no specified penalties or alternative payments for noncompliance.

Strategen recommends that the Commission set an explicit savings target based on retail sales as defined in N.C.G.S. § 62-133.9. The savings target could be informed by a DSM/EE potential study or informed by comparable states savings targets. Based on other comparable states and previous DSM/EE results, the savings target trajectory displayed below is reasonable for DEC and DEP.⁸

	2021	2022	2023
Duke Energy Carolinas	1.40%	1.70%	2.00%
Duke Energy Progress	1.20%	1.60%	2.00%

⁷ ACEEE 2018 State Energy Efficiency Scorecard.

⁸ As in the targets for the Renewable Energy and Energy Efficiency Portfolio Standard, the target could be based on the incremental savings percentage relative to the utility's prior year's system retail electricity sales.

5. The Duke DSM/EE Mechanism in North Carolina

Duke's approved DSM/EE mechanism has multiple components that work in conjunction to provide cost recovery, recover lost revenues, and reward the utility with other incentives for administering DSM/EE programs. Each component is intended to enable efficient DSM/EE program administration and procurement—balancing costs and benefits for ratepayers.

First, Duke recovers all reasonable and prudent costs incurred for adopting and implementing DSM/EE Measures, and capitalizes and earns a rate of return on all or a portion of program-related costs. The Company's cost recovery measure is intended to reduce any burden placed on it for administering DSM/EE programs and reduce regulatory lag, while allowing a return on expenses provides the utility an incentive to invest in DSM/EE programs.

Second, Duke can recover lost revenues associated with the savings associated with implementation of the DSM or EE measures through a Net Lost Revenues adjustment. The Net Lost Revenues adjustment is intended to make the utility whole from a revenue requirement standpoint, at least for the first 36 months after a measure takes effect.

Third, Duke is provided a financial performance incentive, referred to as the Portfolio Performance Incentive or "PPI". The Portfolio Performance Incentive is a shared savings-based incentive mechanism that shares 11.5% of net benefits with DEC and 11.75% with DEP. The Portfolio Performance Incentive is intended to reward the utility for high performance.

Together the above DSM/EE components are intended to create a regulatory mechanism that balances the cost and benefits of DSM and EE for ratepayers. This section briefly describes each of the DSM/EE mechanism components to provide context around the multiple ways in which Duke is made whole or benefits from administering DSM and EE programs. Strategen's analysis within this section demonstrates that the financial incentives, in concert with the Net Lost Revenues adjustment, are excessive and should be altered in order to bring DSM and EE program administration costs into balance with the costs and benefits provided to ratepayers.

5.1 Return on DSM/EE program costs

Duke is allowed to recover all reasonable and prudent DSM/EE program costs through a rate rider. Allowing Duke to recover reasonable program costs is non-controversial.

Duke is also permitted by statute to capitalize costs to the extent the costs are intended to produce future benefits.⁹ DEP's capitalization of O&M and A&G expenses appears to have created a financial incentive, in the form of carrying costs, of between \$10-15 million each year from 2015 to 2018.¹⁰ This represents a financial incentive of over half of the Portfolio Performance Incentive collected in each of these years for DEP.

Allowing a return on O&M and A&G costs is not allowed under traditional cost of service regulation. Doing so creates a financial incentive for the utility to invest in DSM/EE by placing these demand-side expenses on a similar footing as supply infrastructure investments. This should, in effect, reduce the need for a financial performance incentive mechanism. Duke, however, has an additional performance incentive mechanism, the Portfolio Performance Incentive, which is based on shared savings and is discussed in a later section.

Importantly, allowing a return on O&M and A&G expenses in combination with an additional performance incentive is not common practice. When asked, Duke could not provide a single example of another utility that is allowed to earn a return on A&G expenses.¹¹ Notably, Duke utilities outside of the Carolinas are not allowed to both earn a return on expenses and collect a financial incentive.¹²

Strategen recommends that the Commission consider the magnitude of the financial incentive that DEP and DEC receive through the capitalization of O&M and A&G expenses when considering changes to the Portfolio Performance Incentive.

⁹ See N.C. G.S. § 62-133.9(d)(1).

¹⁰ See Duke's response to information request AGO 3-10 (Attachment 1). The \$10-15 million includes both carrying costs net of taxes and income taxes on carrying costs.

¹¹ See Duke's response to information request AGO 3-5 (Attachment 2).

¹² See Duke's response to information request PSDR 2-1, 2-2, 2-3, and 2-4 (Attachment 3).

5.2 Net lost revenues

Duke is allowed to earn revenues lost due to the implementation of DSM/EE investments through the Net Lost Revenues adjustment. Net Lost Revenues reflect the collection of already authorized utility system fixed costs; this collection is meant to bring the utility back in line with its revenue requirement. For this reason, Net Lost Revenues are calculated based on the portion of Duke's retail tariff rates that represent the recovery of fixed costs. Electricity sales reductions that result from an approved measurement unit installed in a Vintage Year are eligible for use in calculating Net Lost Revenues for recovery only for the first 36 months after the installation of the unit. Figures 1 and 2 display the Net Lost Revenues for years 2015-2019 for vintage years starting in 2015.

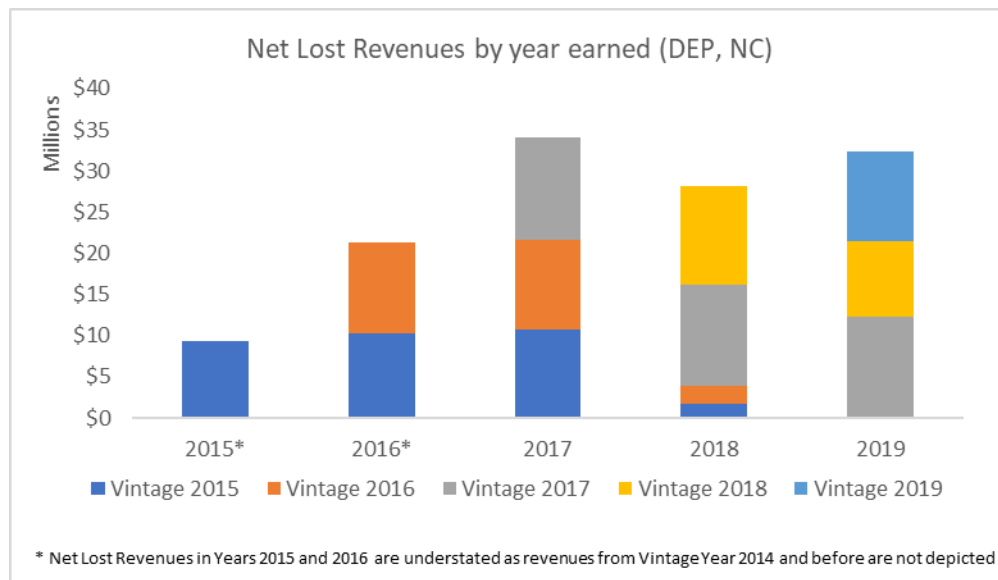


Figure 1: Net Lost Revenues by year earned (DEP, NC)¹³

¹³ Docket Number E-2, Sub 1174, Evans Exhibit 2 (Attachment 4).

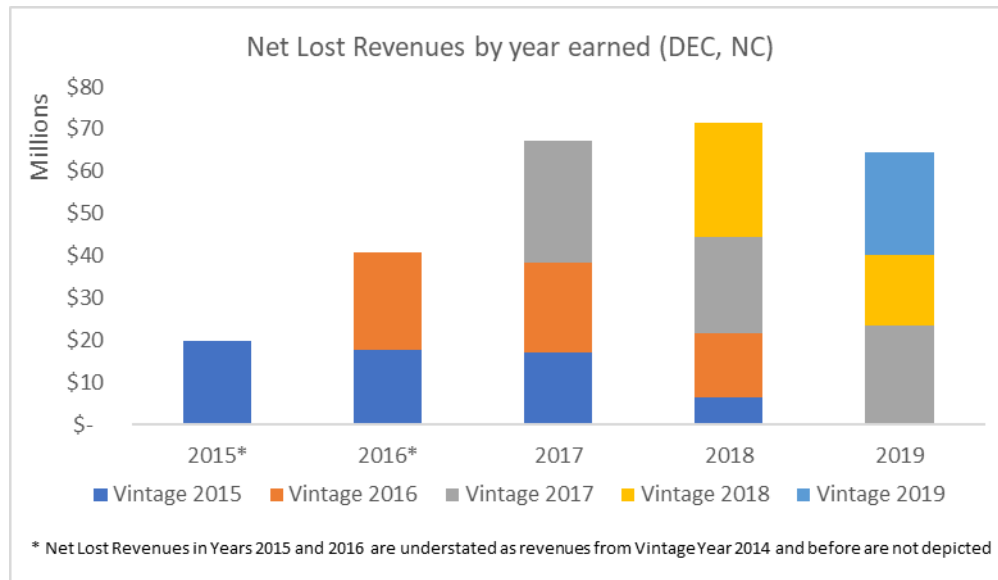


Figure 2: Net Lost Revenues by year earned (DEC, NC)¹⁴

Figure 2 above indicates that Net Lost Revenues have been as high as over \$80 million per year. This is almost 1.5 times the magnitude of the Portfolio Performance Incentive, discussed below.

Net Lost Revenues have been criticized by regulators and research bodies as being extremely complex.¹⁵ The complexity stems from the EM&V calculations that are used to estimate the impact of DSM/EE programs. These EM&V calculations have numerous assumptions that can be subjective, and research has demonstrated that the methodologies vary significantly from state to state.¹⁶ Given the complexity and scope associated with the Net Lost Revenue EM&V calculations, Strategen did not conduct an in-depth analysis of this component of the DSM/EE mechanism. However, the magnitude of the Net Lost Revenue adjustments alone demonstrates the importance of the calculation and the cost of making Duke whole as compensation for administering DSM and EE programs.

¹⁴ Docket Number E-7, Sub 1192, Evans Exhibit 2 (Attachment 5).

¹⁵ See Gilleo et al., 2015. Valuing Efficiency: A Review of Lost Revenue Adjustment Mechanisms. Available at <https://aceee.org/sites/default/files/publications/researchreports/u1503.pdf> See also New Hampshire Public Utilities Commission Docket No. DG 17-048.

¹⁶ Id.

5.3 Portfolio Performance Incentive

Duke's Performance Incentive is based on the sharing of avoided cost savings (i.e., the reduction in generation, transmission, and distribution costs), net of program costs, achieved by those DSM and EE Programs in the aggregate. As the incentive, DEC keeps 11.5% of the net benefits and DEP keeps 11.75%. The net benefits are calculated based on the Utility Cost Test ("UCT") methodology, which compares the DSM/EE program costs incurred by the utility to the avoided supply-side resources costs. The incentive is calculated at the year of approval and converted into a stream of no more than 10 levelized annual payments that the utility receives in subsequent years. Duke is not allowed to accrue a return on the incentive.

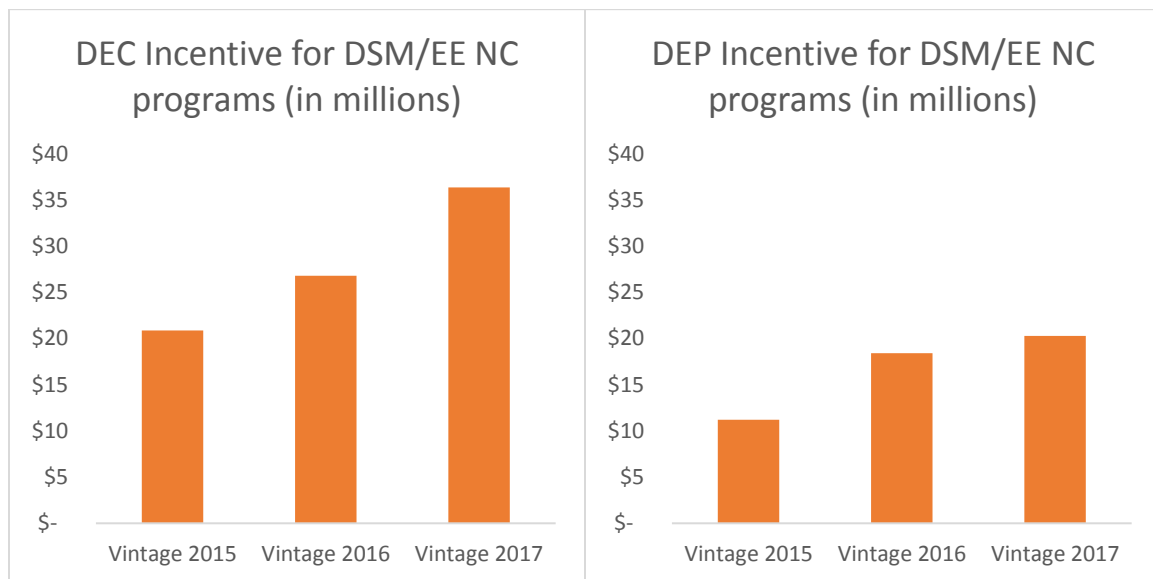


Figure 3: Incentive Payment to DEP/DEC per vintage year

Shared savings is an incentive tool that is used in other states besides NC. However, the design of the shared savings mechanism differs from state to state. At a high-level, shared savings mechanisms differ by the amount of net benefits shared, how net benefits are calculated, and at what threshold savings begin to be shared.

The percentage of net benefits that are shared impacts the magnitude of the incentive paid. Shared savings mechanisms can share a constant percentage of net benefits or create a tiered structure that shares different percentages at different levels of savings.

Shared savings mechanisms also vary by the threshold level at which savings are shared with the utility. Varying the threshold at which savings are shared is another way that can impact the overall financial incentive that is paid out through a shared savings mechanism, depending on utility performance.

Duke's Ohio shared savings mechanism differs in both respects; i.e., both as to the percentage of net benefits shared and as to the threshold at which savings are shared. In Ohio, Duke does not begin to share net benefits until it reaches the required 1% annual savings target—representing a 1% threshold. After it reaches the 1% threshold, a tiered shared savings mechanism is triggered, and the percentage of shared net benefits increases from 6% to 12% depending on the total savings level.¹⁷ Another example is Arkansas. Utilities in Arkansas must reach a threshold of 80% of the annual savings target before they begin to share in net benefits, after which they are rewarded 10% until a cap is reached.¹⁸

Comparing the structure of Duke's shared savings mechanism to other states demonstrates that the North Carolina DSM/EE is designed to provide generous incentives. First, Duke receives a high percentage of net savings. Out of the 12 states that reported a mechanism based on shared net benefits in a survey completed by ACEEE, only Kentucky, Minnesota, and Oklahoma reported shared saving percentages higher than North Carolina.¹⁹ Seven states (AR, AZ, CO, GA, MO, OH, TX) reported significantly lower percentages ranging from 1% to 10%, with many states reporting on the lower end.²⁰ Sharing a higher percentage of savings increases the cost to ratepayers, all else constant, and therefore needs to be balanced with other DSM/EE components design and ultimate impact on performance.

Second, the threshold at which Duke begins to share net savings is low—a zero percent threshold. The zero percent threshold is in contrast with other states, such as Arkansas, Minnesota, and Ohio, all with somewhat similar DSM/EE mechanisms.²¹ Sharing net benefits for all the savings that are generated suggests that Duke is immediately performing above what should be expected. This does not align with best practices related to designing the

¹⁷ See Duke's response to information request PS DR2-4 (see Attachment 3).

¹⁸ See Arkansas Public Service Commission Docket No. 08-137-U.

¹⁹ Nowak et al, [Beyond Carrots for Utilities: A National Review of Performance Incentives for Energy Efficiency](#), ACEEE, 2015 at 11.

²⁰ *Id.*

²¹ See MN PUC Docket No. 08-133, AR Docket No. 08-137-U, and OH Docket No. 08-920-EL-SSO.

performance incentive mechanism. Best practices would suggest setting a realistic target and providing a reward once the utility's performance is "good" or "above average," not immediately.²²

The combination of a high percentage of shared net benefits with a low threshold to begin sharing savings is contributing to an outsized Portfolio Performance Incentive payment to Duke. Figure 2 shows the incentive that DEP would receive in other states for achieving the same savings and having a sharing threshold of zero percent in 2017.²³

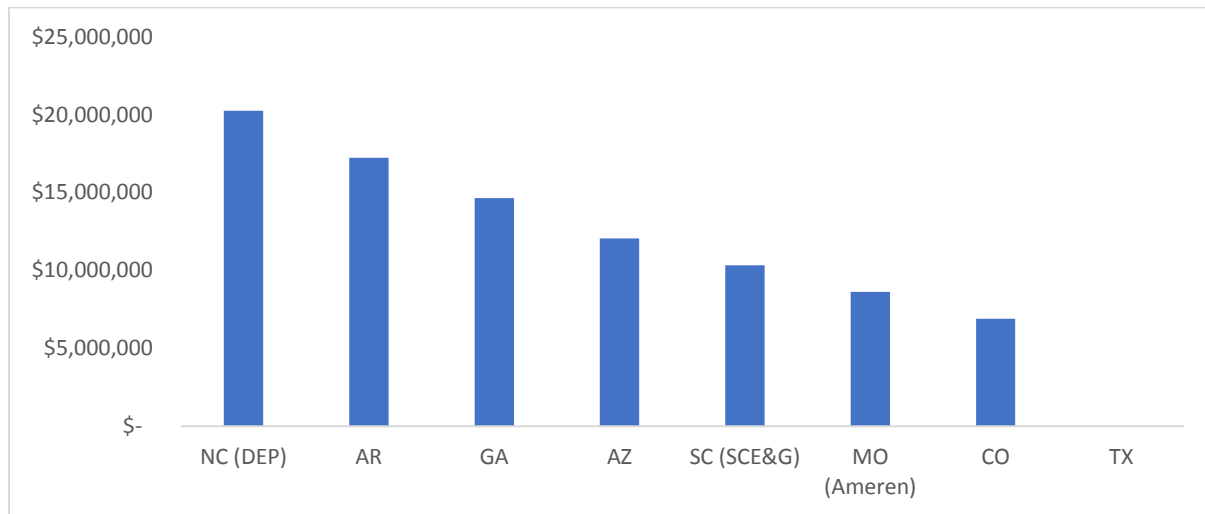


Figure 2: The Portfolio Performance Incentive received by DEP in 2017 compared to representative mechanisms from other states that also implement a shared net benefits incentive structure

Additionally, DEP is also allowed to earn a bonus incentive of \$400,000 once it has achieved a 1% savings target.²⁴ The bonus incentive is insignificant compared to other incentives. It is also designed poorly, given that it is based on a point estimate. The bonus incentive should be removed to simplify the Portfolio Performance Incentive.

Strategen recommends that the Commission should consider changing the threshold point where savings begin to be shared with the utility so that it is set at 75% of the savings target.

²² See https://www.synapse-energy.com/sites/default/files/Utility%20Performance%20Incentive%20Mechanisms%2014-098_0.pdf

²³ Incentive percentages informed by Table 1 in *Id.* at 11.

²⁴ DEC's opportunity to receive a bonus incentive expired in 2018.

6. Cost Effectiveness Criteria

DSM/EE mechanisms typically utilize cost-effectiveness tests to determine program and/or portfolio eligibility criteria. Cost-effectiveness tests include the Total Resource Cost ("TRC") test, Utility Cost Test ("UCT"), Participant Cost Test ("PCT"), Societal Cost Test ("SCT"), Ratepayer Impact Measure ("RIM"), and others. Each test calculates costs or savings taking a different perspective, while some tests account also for non- energy impacts (environmental, health, economic). The incentive mechanism is ultimately meant to promote the interests of the ratepayers, while achieving state policy goals. It is important that the determination of the eligibility of any single measure reflects cost-effective resource procurement in line with state policy goals. The way to achieve this is by conducting the appropriate cost tests and weighing the results of each test appropriately.

Duke uses the UCT and TRC tests to evaluate DSM/EE program cost effectiveness. More specifically, with the exception of Low-Income Programs or other programs explicitly identified at the time a new measure is proposed, all Programs are evaluated with the goal of having a program level UCT and TRC greater than 1.00. The benefits for both tests are the avoided supply costs (i.e., the reduction in generation capacity costs, transmission and distribution capacity costs, and energy costs), valued at marginal cost for the periods when there is a load reduction. The costs for the UCT are the net program or portfolio costs incurred by the utility and the increased supply costs for any period in which load is increased. Utility costs include initial and annual costs, such as the cost of utility equipment, O&M, installation, program or portfolio administration, incentives paid to or on behalf of participants, and participant dropout and removal of equipment (less salvage value). On the other hand, the costs for the TRC test are the utility costs and the incremental costs paid by the participants, plus the increased supply costs for any periods in which load is increased. All costs, no matter who pays for them, are included in this test.

In general, the UCT and TRC are used in an acceptable manner by Duke. However, there are multiple assumptions that go into cost-effective tests that need to be carefully examined. Strategen will discuss three issues with the current evaluation of cost-effectiveness for Duke's DSM/EE programs.

One of the primary issues are the avoided cost calculations used within the cost-effectiveness tests. Duke appears to utilize avoided energy, capacity, and transmission and distribution cost calculations that only factor in summer peaks.²⁵ The focus on summer peaks within Duke's EE incentive mechanisms is not consistent with its focus on winter peaks within its Integrated Resource Plans ("IRP").²⁶ In Duke's IRP, it made the argument that its winter peak was becoming increasingly important for system planning purposes. However, the cost-effectiveness of its DSM/EE programs is being informed by summer peaks and the cost of building a gas combustion turbine.²⁷

The Commission should require Duke to revise the avoided cost calculations used for cost-effectiveness tests to more accurately reflect the time value of energy efficiency. While a combustion turbine can serve both winter and summer peaks, the DSM/EE load shape could be different depending on which peak is used. Having an avoided cost that better reflects the time value of efficiency would value energy efficiency measures in a more detailed way. For example, looking at the energy and capacity benefits throughout the year as opposed to an over-emphasis on discrete summer peaks would likely result in better resource procurement.

A second concern is process related. Duke continues to calculate the RIM test for informative purposes. The RIM test is typically used to inform impacts on non-participants through a rate impact calculation. However, the RIM test has many flaws. Specifically, it includes sunk costs within the calculation, which are irrelevant to future investment decisions, and may not take into consideration that DSM and EE can offset future capital investments.²⁸ For example, a hypothetical measure that removed efficient LED lighting and replaced it with inefficient incandescent lighting would likely pass the RIM test, despite being contrary to customer and societal goals. The RIM test is not useful as the sole or primary indicator of cost-effectiveness for EE programs and therefore should not be used as a screening test. The Commission could continue to utilize the RIM test as an indicator to inform DSM/EE program impacts, but it should be considered with caution.

²⁵ See Duke's response to information request PS DR2-8 (Attachment 6).

²⁶ See Duke's response to information request PS DR2-8 (Attachment 6).

²⁷ See Duke's response to information request PS DR2-8 (Attachment 6).

²⁸ See National Standard Practice Manual. Available at <https://nationalefficiencyscreening.org/national-standard-practice-manual/>

Finally, the Commission does not consider any cost-effectiveness tests that include the cost of emissions. Given that Duke incorporates emissions costs within its IRP, incorporating a cost-effectiveness test, such as a societal cost test, for informational purposes within DSM/EE programs would provide consistency. One of the primary goals of designing the DSM/EE mechanism is to evaluate resources on a level playing field. Without considering emissions within the cost-effectiveness tests, the Commission is leaving out important information that could lead to procuring more cost-effective DSM and EE.

Strategen recommends that the Commission should require Duke to improve the avoided cost calculation used when evaluating the cost effectiveness of measures by more granularly accounting for the time value of energy efficiency. Additionally, the Commission should consider utilizing a cost-effectiveness test that incorporates the cost of emissions for informational purposes.

7. Conclusions

Strategen's analysis of Duke's DSM/EE mechanism indicates that there are duplicative financial incentives including high levels of shared net benefits, with the result that costs are comparatively high for ratepayers. Consequently, a few critical modifications to the mechanisms are recommended so that the incentives provided to Duke are more appropriately aligned with performance.

Strategen makes the following recommendations to the Commission:

Savings Target

- The Commission should set an explicit savings target. The savings target could be informed by a DSM/EE potential study or informed by comparable states savings targets.

- Based on Strategen's analysis, a retail sales performance target with the trajectory identified below would be reasonable.

	2021	2022	2023
Duke Energy Carolinas	1.40%	1.70%	2.00%
Duke Energy Progress	1.20%	1.60%	2.00%

DUKE DSM/EE MECHANISM

- Given that Duke is generously compensated by the Net Lost Revenue mechanism regardless of EE/DSM performance, the Commission should consider restructuring the financial incentive to better align utility compensation with performance. Specifically, the Commission should consider changing the threshold point where savings begin to be shared with the utility. For example, the utility should only begin to share in savings once it has achieved or reached a threshold of 75% of the savings target.

COST-EFFECTIVENESS TESTS

- The Commission should improve the current methodologies used to calculate the Utilities Cost Test ("UCT") and Total Resource Cost ("TRC") test.
 - Specifically, the Commission should require Duke to improve avoided cost calculations by more granularly accounting for the time value of energy efficiency.
- The Commission should create a cost-effectiveness test that incorporates the estimated cost of emissions for informational purposes.



About Strategen

Strategen is an internationally recognized, mission-driven, professional services firm focused on energy sector market transformation for a low carbon grid. Our multidisciplinary team specializes in work with policymakers and regulators, utilities, and unregulated market participants on issues related to zero carbon grid technologies such as energy storage, solar, wind, electric vehicles, demand response and energy efficiency. Our functional expertise includes technical analysis, economic analysis, regulatory thought leadership, and corporate strategy, as well as ability to leverage our thought leadership platform in ways that motivate and empower local leadership and change.



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Education

BA, Environmental Economics,
Western Washington University,
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MS, Agricultural and Resource
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Domain Expertise

Regulatory Strategy

Rate Design

Performance-Based Regulation

Performance Incentive
Mechanisms

Cost of Service Analysis

DER Compensation

Rate Case Support

Electric Vehicles

Renewable Energy Program
Design

Expert Testimony

Oklahoma Gas & Electric,
Formula Rates and Rate
Design, Docket No. 201800140

Public Service Company of
Oklahoma, Rate Design and
Performance-Based Regulation,
Docket No. 201800096

Veteran Energy Delivery of
Ohio, CCOS and Rate Design,
Docket No. 18-0298-GA-AIR

Professional Bio

Ron is a Manager in the Government and Utility Practice at Strategen. He works with clients to improve regulatory structures in order to more efficiently achieve public policy goals, such as transitioning the power system to clean energy. Additionally, Ron provides expert testimony on numerous topics including multi-year rate plans, performance incentive mechanisms, cost of service modeling, residential and commercial rate design, renewable energy program design, and electric vehicle policy.

Prior to Joining Strategen, Ron worked as an Economist for the Minnesota Attorney General's Office for five years. He has also worked as an economic researcher for two universities and the United States Geological Survey.

Ron earned a Bachelor of Arts and Minor from Western Washington University in Environmental Economics and Mathematics, respectively, and a Master of Science in Resource Economics from Colorado State University.

Speaking Engagements

National Association of State Utility Consumer Advocates Annual Meeting, Orlando, FL, "Grid Mod Strategies for Consumer Advocates", 2018

PBR Technical Workshop I for the Hawai'i Public Utilities Commission, Honolulu, Hawai'i, "PBR Lessons from Minnesota", 2018

National Association of State Utility Consumer Advocates Mid-Year Meeting, Minneapolis, MN, "Methodologies for Calculating an Appropriate Customer Charge", 2018

Previous Experience

Economist

Minnesota Attorney General's Office – St. Paul, MN

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Education

BA, Chemistry, Princeton University, 2007

PSM, Solar Energy Engineering and Commercialization, Arizona State University, 2007

Domain Expertise

Management Consulting

Rate Design

Tech-to-Market Strategy

Energy Policy & Regulatory Strategy

Energy Product Development

Stakeholder Engagement

Publications

"Are Recent Forays into Restructuring a Threat to Energy Efficiency?", American Council for an Energy Efficiency Economy (ACEEE), 2014

"Performance Based Models to Address Regulatory Challenges", The Electricity Journal, 2014

"High-Speed Rail and Reducing Oil Dependence", Transport Beyond Oil, Island Press, 2013

"Transmission and Renewable Energy Planning in California," Western Governors Association, 2012

Professional Bio

Ed helps to lead the Utility and Government consulting practices at Strategen. He specializes in evaluation and design of policies and programs to advance deployment distributed energy resources, demand-side management programs, energy storage and grid integration of renewable energy. Ed has served clients in the renewable energy, energy efficiency, and energy storage industries, including consumer advocates, public interest organizations, Fortune 500 companies, energy project developers, trade associations, utilities, government agencies, universities and foundations. His analysis has given companies strategic insight into clean energy investment opportunities and has helped to guide regulations and policies in many states across the country.

Prior to joining Strategen, Ed worked as an independent consultant where he provided technical analysis to a law firm in Arizona, supporting the firm's clients in cases before the Arizona Corporation Commission. He also worked to provide technical analysis on demand-side management policies in Michigan, Illinois, Pennsylvania and several other states.

Ed earned his bachelor's degree in Chemistry from Princeton University and two degrees from Arizona State University - Master of Science (M.S.) in Sustainability and Professional Science Master (P.S.M.) of Solar Energy Engineering and Commercialization.

Previous Experience

Consultant

Kris Mayes Law Firm – Phoenix, AZ
June 2012 – March 2015

Senior Consultant

Schlegel & Associates – Phoenix, AZ
November 2012 – March 2015

Project Manager & Researcher

Arizona State University – Temple, AZ
June 2012 – March 2015

Attorney General's Office
DSM/EE Mechanism Review
Data Request No. 3
Docket No. E-7, Sub 1032
Docket No. E-2, Sub 931
Item No. 3-10
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DUKE ENERGY CAROLINAS, LLC and DUKE ENERGY PROGRESS, LLC

Request:

Please provide a spreadsheet with all actual DEP and DEC EE and DSM Program revenues and costs for all years available. Further, provide a breakout of revenues into PPI revenues, NLR, Program and common cost recovery, return on program expenses, and bonus payment for all years for which the data is available. Where applicable, please provide your answer in a live Excel spreadsheet with all links and formula intact.

Response:

For DEC, please see attached Excel file "DEC AG 3-10" for a breakdown of the revenue requirement for Vintage 2014 through estimated Vintage 2020. Miller Exhibit 2 page 1A shows the cumulative total for Vintage 2014 in column M broken down by program cost, earned utility incentives (or PPI), lost revenue and return. The remainder of the years is shown in Miller Exhibit 2 pages 1-6. Total revenue received offsets the revenue requirement. Please note that revenues collected are not tracked at the component level. A total over/under collected calculation is performed to determine if interest needs to be calculated and then if so, an estimate based on percentages is used to allocate revenues. This can be different each year. As such, the best and most useful information the Company can provide is total revenues to calculate the total revenue requirement.



DEC AG 3-10.xlsx

For DEP, please see attached Excel file "DEP AG 3-10". There is a tab for each year, which breaks out revenue requirement by program. There is a column for lost revenues, PPI, DSDR costs, carrying costs and amortizations. These amounts can be subject to true-up in following years if EM&V reports are received; however, these changes are very small and

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therefore, the Company did not attempt to incorporate them in this type of schedule. There is also a separate tab that breaks out the amount of revenue collected for that test year period. Prior to filing year 2016, interest was only calculated on over-recovered balances at a total level, therefore revenues were never estimated to be broken out. As of filing year 2016, an estimate of revenue collections by type was calculated to determine if there is an over or under-recovery for interest calculation purposes. All amounts provided are best estimates available.



DEP AG 3-10.xlsx

DUKE ENERGY PROGRESS, LLC
Docket No. E-2, Sub 1108
EMF Period Revenue Requirement Summary - NC Level
January 2015 - December 2015

		O&M	Insurance	A&G Expense	Capitalized O&M and A&G	Amortization of Capitalized O&M	Amortization of Capitalized A&G	Prior Period Amortization	DSDR Capital Costs	Income Taxes on DSDR Capital Costs	DSDR Property Taxes	DSDR Depreciation	Carrying Costs Net of Taxes	Income Taxes on Carrying Cost	Rev Reqmt Before PPI & NLR	Net Lost Revenue Recoupment	Program Performance Incentive	Rev Reqmt With PPI & NLR
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
					ΣCols(1) thru (3)	((1)+(2))/10	(3)/3								ΣCols(5) thru (13)			ΣCols(14) thru (18)
NC DSM Program Expenses																		
1	CIG DR	Per Books	1,634,787		1,634,787	163,479	-	624,646					-	-	788,125		150,959	939,084
2	EnergyWise	Per Books	10,510,327		10,510,327	1,051,033	-	4,746,764					-	-	5,797,797		3,243,985	9,041,782
3	EnergyWise for Business	Per Books	56,307		56,307	18,769	-	-					-	-	18,769		-	18,781
4	Total DSM	Σ Lines 1 thru 2	12,201,421		12,201,421	1,233,281	-	5,371,410					-	-	6,604,691		12	9,999,647
5	DSM Assigned A&G and CCost	Per Books	-	1,175,218	1,175,218		391,739	493,628					1,805,983	797,582	3,488,932			3,488,932
6	Total DSM and Assigned Costs	Σ Lines 4 thru 5	12,201,421	1,175,218	13,376,639	1,233,281	391,739	5,865,037					1,805,983	797,582	10,093,623		12	13,488,578
NC EE Program Expenses																		
7	Residential Home Advantage	Per Books	-		-	-	-	415,195					-	-	415,195	4,374	176,476	596,045
8	Home Energy Improvem't	Per Books	4,516,545		4,516,545	451,655	-	2,826,174					-	-	3,277,829	684,594	350,078	4,312,501
9	Neighborhood Energy Saver	Per Books	1,352,367		1,352,367	135,237	-	859,024					-	-	994,261	212,425	-	1,206,686
10	Solar Hot Water Pilot	Per Books	-		-	-	-	39,343					-	-	-	-	-	39,343
11	EE Lighting (Res)*	Per Books (allocated)	12,462,831		12,462,831	2,492,566	-	6,525,368					-	-	9,017,934	14,358,665	3,525,194	26,901,793
12	Appliance Recycling	Per Books	1,040,372		1,040,372	104,037	-	527,787					-	-	631,824	633,578	116,821	1,382,223
13	My Home Energy Report	Per Books	5,099,942		5,099,942	5,099,942	-	-					-	-	5,099,942	5,015,789	213,290	10,329,021
14	Residential New Construction	Per Books	6,351,007		6,351,007	635,101	-	710,997					-	-	1,346,098	617,399	144,871	2,108,368
15	Home Depot CFL	Per Books	-		-	-	-	34,012					-	-	34,012	-	-	34,012
16	Energy Education Program for Schools	Per Books	600,205		600,205	120,041	-	-					-	-	120,041	62,822	-	182,863
17	Multi-Family	Per Books	2,228,794		2,228,794	445,759	-	-					-	-	445,759	418,211	-	1,191,032
18	Subtotal-Residential	Σ Lines 7 thru 15	33,652,063		33,652,063	9,484,338	-	11,937,900					-	-	21,422,238	22,007,857	4,853,792	48,283,887
19	CIG Energy Efficiency	Per Books	5,306,561		5,306,561	530,656	-	3,608,712					-	-	4,139,368	6,418,440	3,481,402	14,039,210
20	EE Lighting (Gen Svc)*	Per Books (allocated)	1,513,653		1,513,653	302,731	-	761,866					-	-	1,064,597	5,646,190	869,321	7,580,108
21	Small Business Energy Saver	Per Books	8,336,106		8,336,106	833,611	-	1,067,618					-	-	1,901,229	2,756,208	539,082	5,196,519
22	Business Energy Report	Per Books	63,355		63,355	21,118	-	-					-	-	21,118	-	-	21,118
23	Subtotal-General Service	Σ Lines 19 thru 21	15,219,675		15,219,675	1,688,116	-	5,438,196					-	-	7,126,312	14,820,838	4,889,805	26,836,955
24	Total of EE Programs	Lines 18 + 23	48,871,738		48,871,738	11,172,454	-	17,376,096					-	-	28,548,550	36,828,695	9,743,597	75,120,842
25	EE Assigned A&G and CCost	Per Books	-	4,335,001	4,335,001		1,445,000	1,608,313					4,953,167	2,187,482	10,193,962			10,193,962
26	Total EE and Assigned Costs	Lines 24 + 25	48,871,738	4,335,001	53,206,739	11,172,454	1,445,000	18,984,409					4,953,167	2,187,482	38,742,512	36,828,695	9,743,597	85,314,804
NC DSDR Program Expenses																		
27	DSDR Program	Per Books	4,703,207	866,164	5,569,371	556,937	-	3,372,331	7,713,185	3,406,397	614,399	11,027,972			26,691,221	420,831		27,112,052
28	DSDR Assigned A&G and CCost	Per Books	-	-	-	-	-	-					1,073,170	473,947	1,547,117			1,547,117
29	Total DSDR and Assigned Costs	Σ Lines 27 thru 28	4,703,207	866,164	5,569,371	556,937	-	3,372,331	7,713,185	3,406,397	614,399	11,027,972	1,073,170	473,947	28,238,338	420,831	-	28,659,169
30	Test Period Totals	Lines 6 + 26 + 29	65,776,366	866,164	5,510,219	12,962,672	1,836,739	28,221,777	7,713,185	3,406,397	614,399	11,027,972	7,832,320	3,459,011	77,074,473	37,249,538	13,138,541	127,462,551

*All Non-Residential programs are amortized over a 10 year period. The Residential Lighting Program, Multi-Family EE and EE Education are recoverable over a 5 year period.
My Home Energy Report is recoverable over a 1 year period. All other Residential EE programs are recoverable over 10 years.

Please note: Exhibit may not foot due to rounding.

Note: My Home Energy Report 2015 costs includes \$171,843.92 of 2014 Residential Energy Efficiency Benchmarking costs that were excluded from accounting amortization calculations in 2014 and included in 2015. PPI calculations in 2014 included these costs; therefore no further adjustment is required.

DUKE ENERGY PROGRESS, LLC
Docket No. E-2, Sub 1145
EMF Period Revenue Requirement Summary - NC Level
January 2016 - December 2016

		O&M	Insurance	A&G Expense	Capitalized O&M and A&G	Amortization of Capitalized O&M	Amortization of Capitalized A&G	Prior Period Amortization	DSDR Capital Costs	Income Taxes on DSDR Capital Costs	DSDR Property Taxes	DSDR Depreciation	Carrying Costs Net of Taxes	Income Taxes on Carrying Cost	Rev Reqmt Before PPI & NLR	Net Lost Revenue Recoupment	Program Performance Incentive	Rev Reqmt With PPI & NLR
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
					ΣCols(1) thru(3)	((1)+(2))/10	(3)/3								ΣCols(9) thru(13)			ΣCols(14) thru(16)
NC DSM Program Expenses																		
1	CIG DR	Per Books	1,317,982		1,317,982	439,327	-	748,162					-	-	1,187,490		150,959	1,338,449
2	EnergyWise	Per Books	11,121,683		11,121,683	1,112,168	-	5,455,944					-	-	6,568,112		4,155,197	10,723,309
3	EnergyWise for Business	Per Books	907,756		907,756	302,585	-	18,769					-	-	321,354	18,814	(32,505)	307,663
4	Total DSM	Σ Lines 1 thru 3	13,347,421		13,347,421	1,854,081	-	6,222,875					-	-	8,076,956	18,814	4,273,651	12,369,421
5	DSM Assigned A&G and CCost	Per Books	-	826,570	826,570		275,523	569,258					2,088,641	901,031	3,834,453			3,834,453
6	Total DSM and Assigned Costs	Σ Lines 4 thru 5	13,347,421	826,570	14,173,991	1,854,081	275,523	6,792,133					2,088,641	901,031	11,911,411	18,814	4,273,651	16,203,874
NCEE Program Expenses																		
7	Residential Home Advantage	Per Books	-		-	-	-	415,195					-	-	415,195	-	176,476	591,671
8	Home Energy Improvem't	Per Books	4,863,587		4,863,587	486,359	-	3,194,418					-	-	3,680,777	865,206	363,925	4,909,908
9	Neighborhood Energy Saver	Per Books	1,660,132		1,660,132	166,013	-	974,446					-	-	1,140,459	256,359	-	1,396,818
10	Solar Hot Water Pilot	Per Books	-		-	-	-	39,343					-	-	39,343	-	-	39,343
11	EE Lighting (Res)*	Per Books (allocated)	12,579,512		12,579,512	2,515,902	-	7,705,052					-	-	10,220,954	12,497,372	3,293,264	26,011,591
12	Appliance Recycling	Per Books	(110,818)		(110,818)	(11,082)	-	616,905					-	-	605,823	624,617	119,833	1,350,273
13	My Home Energy Report	Per Books	4,764,032		4,764,032	4,764,032	-	-					-	-	4,764,032	6,776,039	469,333	12,009,404
14	Residential New Construction	Per Books	7,607,501		7,607,501	760,750	-	1,249,458					-	-	2,010,208	962,767	313,262	3,286,237
15	Home Depot CFL	Per Books	-		-	-	-	34,012					-	-	34,012	-	-	34,012
16	Energy Education Program for Schools	Per Books	669,297		669,297	133,859	-	97,979					-	-	231,838	158,162	-	390,001
17	Save Energy & Water Kits	Per Books	545,584		545,584	109,117	-	-					-	-	109,117	332,610	223,155	664,883
18	Residential Energy Assessments	Per Books	1,146,853		1,146,853	229,371	-	-					-	-	229,371	74,198	56,121	359,689
19	Multi-Family	Per Books	1,654,217		1,654,217	330,843	-	323,805					-	-	654,648	1,333,331	285,481	2,273,461
20	Found Revenue	Per Books	-		-	-	-	-					-	-	-	-	-	-
21	Subtotal-Residential	Σ Lines 7 thru 20	35,379,897		35,379,897	9,485,165	-	14,650,613					-	-	24,135,778	23,880,662	5,300,852	53,317,291
22	CIG Energy Efficiency	Per Books	(6)		(6)	(2)	-	4,036,623					-	-	4,036,621			4,036,621
23	EE Lighting (Gen Svc)*	Per Books (allocated)	1,527,825		1,527,825	305,565	-	923,287					-	-	1,228,852	4,259,577	1,021,849	6,510,279
24	Non-Residential Energy Efficiency Program	Per Books	11,452,103		11,452,103	3,817,368	-	-					-	-	3,817,368	7,220,789	4,763,526	15,801,683
25	Small Business Energy Saver	Per Books	7,551,375		7,551,375	2,517,125	-	1,686,506					-	-	4,203,631	4,647,161	1,448,020	10,298,811
26	Business Energy Report	Per Books	56,226		56,226	18,742	-	8,799					-	-	27,541	-	-	27,541
27	Found Revenue	Per Books	-		-	-	-	-					-	-	-	(68,561)	-	(68,561)
28	Subtotal-General Service	Σ Lines 22 thru 27	20,587,523		20,587,523	6,658,798	-	6,655,215					-	-	13,314,013	16,058,966	7,233,395	36,606,374
29	Total of EE Programs	Lines 21 + 28	55,967,420		55,967,420	16,143,962	-	21,305,828					-	-	37,449,790	39,939,628	12,534,247	89,923,665
30	EE Assigned A&G and CCost	Per Books	-	3,079,705	3,079,705		1,026,568	1,995,054					5,938,732	2,562,056	11,522,410			11,522,410
31	Total EE and Assigned Costs	Lines 29 + 30	55,967,420	3,079,705	59,047,125	16,143,962	1,026,568	23,300,882					5,938,732	2,562,056	48,972,201	39,939,628	12,534,247	101,446,076
NC DSDR Program Expenses																		
32	DSDR Program	Per Books	4,555,619	799,061	5,354,680	535,468	-	3,803,888	6,922,417	2,989,795	666,934	11,002,122			25,920,624	261,724		26,182,348
33	DSDR Assigned A&G and CCost	Per Books	-	-	-	-	-	-	-	-	-	-	1,140,039	491,824	1,631,863			1,631,863
34	Total DSDR and Assigned Costs	Σ Lines 32 thru 33	4,555,619	799,061	5,354,680	535,468	-	3,803,888	6,922,417	2,989,795	666,934	11,002,122	1,140,039	491,824	27,552,487	261,724	-	27,814,211
35	Test Period Totals	Lines 6 + 31 + 34	73,870,460	799,061	3,906,275	78,575,796	18,533,511	1,302,092	33,896,903	6,922,417	2,989,795	666,934	9,167,412	3,954,911	88,436,099	40,220,166	16,807,898	145,464,161

*All Non-Residential programs are amortized over a 3 year period. The Residential Lighting Program, Multi-Family EE and EE Education are recoverable over a 5 year period. My Home Energy Report is recoverable over a 1 year period. All other Residential EE programs are recoverable over 10 years.

Please note: Exhibit may not foot due to rounding.

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DUKE ENERGY PROGRESS, LLC
Docket No. E-2, Sub 1174
EMF Period Revenue Requirement Summary - NC Level
January 2017 - December 2017

		O&M	Insurance	A&G Expense	Capitalized O&M and A&G	Amortization of Capitalized O&M	Amortization of Capitalized A&G	Prior Period Amortization	DSDR Capital Costs	Income Taxes on DSDR Capital Costs	DSDR Property Taxes	DSDR Depreciation	Carrying Costs Net of Taxes	Income Taxes on Carrying Cost	Rev Reqmt Before PPI & NLR	Net Lost Revenue Recoupment	Program Performance Incentive	Rev Reqmt With PPI & NLR
		(1)	(2)	(3)	(4) ΣCols(1)thru(3)	(5) (1)-(2)/(10)	(6) (3)/(3)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14) ΣCols(14)thru(13)	(15)	(16)	(17) ΣCols(17)thru(16)
NC DSM Program Expenses																		
1	CIG DR	Per Books	1,254,690		1,254,690	418,230	-	1,211,354					-	-	1,629,584		233,850	1,863,435
2	EnergyWise	Per Books	10,809,353		10,809,353	1,080,935	-	6,846,043					-	-	7,926,978		4,959,965	12,886,943
3	EnergyWise for Business		1,145,187		1,145,187	381,729		321,354							703,083	49,698	(57,486)	695,295
4	Total DSM	Σ Lines 1 thru 2	13,209,230		13,209,230	1,880,894	-	8,378,751					-	-	10,259,646	49,698	5,136,330	15,445,674
5	DSM Assigned A&G and CCost	Per Books	-	724,598	724,598		241,533	644,481					2,302,515	970,232	4,158,761			4,158,761
6	Total DSM and Assigned Costs	Σ Lines 4 thru 5	13,209,230	724,598	13,933,828	1,880,894	241,533	9,023,232					2,302,515	970,232	14,418,407	49,698	5,136,330	19,604,434
NC EE Program Expenses																		
7	Residential Home Advantage	Per Books	-		-	-	-	409,789					-	-	409,789	-	176,476	586,265
8	Home Energy Improvem't	Per Books	5,690,293		5,690,293	569,029		3,799,377					-	-	4,368,406	1,068,146	354,753	5,791,306
9	Neighborhood Energy Saver	Per Books	1,455,850		1,455,850	145,585		1,173,332					-	-	1,318,917	282,317	-	1,601,234
10	Solar Hot Water Pilot	Per Books	-		-	-		39,343					-	-	39,343		-	39,343
11	EE Lighting (Res)*	Per Books (allocated)	8,914,921		8,914,921	1,782,984		9,708,887					-	-	11,491,871	9,105,170	3,742,027	24,339,068
12	Appliance Recycling	Per Books	4,566		4,566	457		633,458					-	-	633,915	396,451	119,754	1,150,119
13	My Home Energy Report	Per Books	5,519,603		5,519,603	5,519,603		-					-	-	5,519,603	6,016,176	22,039	11,557,818
14	Residential New Construction	Per Books	9,539,733		9,539,733	953,973		2,170,251					-	-	3,124,224	1,588,365	522,045	5,234,634
15	Home Depot CFL	Per Books	-		-	-	-	21,623					-	-	21,623	-	-	21,623
16	Energy Education Program for Schools	Per Books	683,286		683,286	136,657		253,900					-	-	390,557	335,531	-	726,088
17	Save Energy & Water Kits	Per Books	726,505		726,505	145,301		109,117					-	-	254,418	1,741,733	717,765	2,713,917
18	Residential Energy Assessments	Per Books	1,523,096		1,523,096	304,619		229,371					-	-	533,990	370,750	115,536	1,020,276
19	Multi-Family	Per Books	2,055,123		2,055,123	411,025		776,602					-	-	1,187,627	2,056,521	505,626	3,749,773
20	Found Revenue	Per Books	-		-	-		-					-	-	-	-	-	-
21	Subtotal-Residential	Σ Lines 7 thru 20	36,112,976		36,112,976	9,969,233	-	19,325,050	-	-	-	-	-	-	29,294,283	22,961,160	6,276,021	58,531,465
22	CIG Energy Efficiency	Per Books	-		-	-		4,181,401					-	-	4,181,401			4,181,401
23	EE Lighting (Gen Svc)*	Per Books (allocated)	1,080,475		1,080,475	216,095		1,178,424					-	-	1,394,519	2,605,783	1,213,527	5,213,828
24	Non-Residential Energy Efficiency Program	Per Books	17,896,772		17,896,772	5,965,591		3,817,368					-	-	9,782,959	8,747,463	6,944,270	25,474,692
25	Smart Saver Prescriptive	Per Books	-		-	-		-					-	-	-	-	-	-
26	Smart Saver Custom	Per Books	-		-	-		-					-	-	-	-	-	-
27	Smart Saver Performance Incentive	Per Books	-		-	-		-					-	-	-	8,952	7,194	16,146
28	Small Business Energy Saver	Per Books	7,168,664		7,168,664	2,389,555		4,522,520					-	-	6,912,075	5,825,104	2,221,389	14,958,568
29	Business Energy Report	Per Books	16,616		16,616	5,539		39,860					-	-	45,399	577	-	45,976
30	Found Revenue	Per Books	-		-	-		-					-	-	-	(186,197)	-	(186,197)
30	Subtotal-General Service	Σ Lines 22 thru 29	26,162,527		26,162,527	8,576,779	-	13,739,573	-	-	-	-	-	-	22,316,352	17,001,682	10,386,380	49,704,414
31	Total of EE Programs	Lines 21 + 30	62,275,503		62,275,503	18,546,012	-	33,064,623					-	-	51,610,635	39,962,842	16,662,401	108,235,879
32	EE Assigned A&G and CCost	Per Books	-	2,763,836	2,763,836		921,279	2,382,244					6,683,696	2,816,397	12,803,616			12,803,616
33	Total EE and Assigned Costs	Lines 31 + 32	62,275,503	2,763,836	65,039,339	18,546,012	921,279	35,446,867					6,683,696	2,816,397	64,414,251	39,962,842	16,662,401	121,039,494
NC DSDR Program Expenses																		
34	DSDR Program	Per Books	3,976,242	735,060	4,711,302	471,130	-	4,436,826	6,339,403	2,672,041	603,847	11,031,510			25,554,757	132,107		25,686,864
35	DSDR Assigned A&G and CCost	Per Books	-	-	-	-	-	-					1,179,711	497,109	1,676,820			1,676,820
36	Total DSDR and Assigned Costs	Σ Lines 34 thru 35	3,976,242	735,060	4,711,302	471,130	-	4,436,826	6,339,403	2,672,041	603,847	11,031,510	1,179,711	497,109	27,231,577	132,107	-	27,363,684
37	Test Period Totals	Lines 6 + 33 + 36	79,460,975	735,060	3,488,434	83,684,469	20,898,037	1,162,811	48,906,925	6,339,403	2,672,041	603,847	11,031,510	10,165,922	4,283,738	106,064,236	40,144,647	21,798,731

*All Non-Residential programs are amortized over a 3 year period. The Residential Lighting Program, Multi-Family EE and EE Education are recoverable over a 5 year period. My Home Energy Report is recoverable over a 1 year period. All other Residential EE programs are recoverable over 10 years.

Please note: Exhibit may not foot due to rounding.

	O&M	Insurance	A&G Expense	Capitalized O&M and A&G	Amortization of Capitalized O&M	Amortization of Capitalized A&G	Prior Period Amortization	DSDR Capital Costs	Income Taxes on DSDR Capital Costs	DSDR Property Taxes	DSDR Depreciation	Carrying Costs Net of Taxes	Income Taxes on Carrying Cost	Rev Reqmt Before PPI & NLR	Net Lost Revenue Recoupment	Program Performance Incentive	Rev Reqmt With PPI & NLR
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
				ΣCols(1)thru(3)	((1)+(2))/10	(3)/3								ΣCols(5)thru(13)			ΣCols(14)thru(18)
NC DSM Program Expenses																	
1 CIG DR	1,399,223			1,399,223	466,408	-	1,617,836					-	-	2,084,244		291,878	2,376,122
2 EnergyWise	12,087,626			12,087,626	1,208,763	-	7,832,408					-	-	9,041,171		5,613,145	14,654,316
3 EnergyWise for Business	1,733,219			1,733,219	577,740		695,263							1,273,003	57,289	(124,125)	1,206,167
4 Total DSM	15,220,068			15,220,068	2,252,910	-	10,145,508					-	-	12,398,418	57,289	5,780,898	18,236,605
5 DSM Assigned A&G and CCost	-		767,276	767,276		255,759	609,858					2,809,943	624,905	4,300,465			4,300,465
6 Total DSM and Assigned Costs	15,220,068		767,276	15,987,344	2,252,910	255,759	10,755,366					2,809,943	624,905	16,698,883	57,289	5,780,898	22,537,070
NC EE Program Expenses																	
7 Residential Home Advantage	-			-	-	-	380,546					-	-	380,546	-	176,476	557,022
8 Home Energy Improvem't	5,861,122			5,861,122	586,112		4,347,799					-	-	4,933,911	672,751	340,898	5,947,560
9 Neighborhood Energy Saver	1,500,588			1,500,588	150,059		1,314,427					-	-	1,464,486	134,180	-	1,598,666
10 Solar Hot Water Pilot	-			-	-		38,418					-	-	38,418	-	-	38,418
11 EE Lighting (Res)*	7,117,425			7,117,425	1,423,485		9,737,010					-	-	11,160,495	2,950,128	4,163,487	18,274,110
12 Appliance Recycling	-			-	-		633,915					-	-	633,915	52,165	119,754	805,834
13 My Home Energy Report	6,250,206			6,250,206	6,250,206		-					-	-	6,250,206	6,433,772	(63,585)	12,620,393
14 Residential New Construction	10,723,253			10,723,253	1,072,325		3,124,224					-	-	4,196,549	1,170,118	582,765	5,949,433
15 Home Depot CFL	-			-	-	-	2,495					-	-	2,495	-	-	2,495
16 Energy Education Program for Schools	550,291			550,291	110,058		390,557					-	-	500,615	218,873	-	719,488
17 Save Energy & Water Kits	670,940			670,940	134,188		254,418					-	-	388,606	1,630,652	941,861	2,961,119
18 Residential Energy Assessments	1,505,780			1,505,780	301,156		533,990					-	-	835,146	602,369	255,573	1,693,089
19 Multi-Family	1,959,175			1,959,175	391,835		1,187,627					-	-	1,579,462	1,441,342	615,984	3,636,788
20 Found Revenue	-			-	-		-					-	-	-	(4,903)	-	(4,903)
21 Subtotal-Residential	36,138,780			36,138,780	10,419,425	-	21,945,426	-	-	-	-	-	-	32,364,851	15,301,448	7,133,214	54,799,512
22 CIG Energy Efficiency	-			-	-		4,114,401					-	-	4,114,401			4,114,401
23 EE Lighting (Gen Svc)*	862,454			862,454	172,491		1,181,699					-	-	1,354,190	1,207,667	1,384,376	3,946,232
24 Non-Residential Energy Efficiency Programs	-			-	-		9,782,959					-	-	9,782,959	8,638,552		18,421,511
25 Smart Saver Prescriptive	9,493,158			9,493,158	3,164,386		-					-	-	3,164,386		8,910,038	12,074,424
26 Smart Saver Custom	1,767,818			1,767,818	589,239		-					-	-	589,239		250,414	839,653
27 Smart Saver Performance Incentive	-			-	-		-					-	-	-	46,133	29,805	75,938
28 Small Business Energy Saver	7,201,646			7,201,646	2,400,549		6,912,075					-	-	9,312,624	4,256,047	2,630,625	16,199,295
29 Business Energy Report	-			-	-		36,600					-	-	36,600	-	-	36,600
30 Found Revenue	-			-	-		-					-	-	-	(206,825)	-	(206,825)
30 Subtotal-General Service	19,325,076			19,325,076	6,326,665	-	22,027,734	-	-	-	-	-	-	28,354,399	13,941,574	13,205,257	55,501,231
31 Total of EE Programs	55,463,856			55,463,856	16,746,089	-	43,973,159					-	-	60,719,249	29,243,022	20,338,471	110,300,742
32 EE Assigned A&G and CCost	-		2,859,319	2,859,319		953,106	2,295,518					7,954,289	1,768,764	12,971,677			12,971,677
33 Total EE and Assigned Costs	55,463,856		2,859,319	58,323,175	16,746,089	953,106	46,268,677					7,954,289	1,768,764	73,690,927	29,243,022	20,338,471	123,272,420
NC DSDR Program Expenses																	
34 DSDR Program	3,693,521	670,117		4,363,638	436,364	-	4,756,429	6,418,064	1,427,080	603,872	10,427,643			24,069,452	2,329		24,071,781
35 DSDR Assigned A&G and CCost	-		-	-	-	-	-					1,316,534	292,752	1,609,286			1,609,286
36 Total DSDR and Assigned Costs	3,693,521	670,117	-	4,363,638	436,364	-	4,756,429	6,418,064	1,427,080	603,872	10,427,643	1,316,534	292,752	25,678,738	2,329	-	25,681,067
37 Test Period Totals	74,377,445	670,117	3,626,595	78,674,157	19,435,363	1,208,865	61,780,472	6,418,064	1,427,080	603,872	10,427,643	12,080,766	2,686,421	116,068,548	29,302,640	26,119,369	171,490,556

*All Non-Residential programs are amortized over a 3 year period. The Residential Lighting Program, Multi-Family EE and EE Education are recoverable over a 5 year period. My Home Energy Report is recoverable over a 1 year period. All other Residential EE programs are recoverable over 10 years.

Please note: Exhibit may not foot due to rounding.

Attorney General's Office
DSM/EE Mechanism Review
Data Request No. 3
Docket No. E-7, Sub 1032
Docket No. E-2, Sub 931
Item No. 3-5
Page 1 of 1

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DUKE ENERGY CAROLINAS, LLC and DUKE ENERGY PROGRESS, LLC

Request:

Please provide a list of all states (and utilities) of which Duke has knowledge that have allowed a rate of return on administrative and general expenses of DSM and/or EE programs since their inception.

Response:

Duke has performed no research on other states or utilities regarding the allowance of returns on DSM and/or EE related administrative and general expenses. As such, Duke has no knowledge of other states or utilities allowing a rate of return on administrative and general expenses.

NC Public Staff
Docket No. E-7, Sub 1032
Docket No. E-2, Sub 931
Data Request No. 2
Item No. 2-1
Page 1 of 1

DUKE ENERGY CAROLINAS, LLC and DUKE ENERGY PROGRESS, LLC

Request:

Please provide a narrative on the level of incentives and compensation for lost revenues available to Duke Energy Florida (DEF) associated with the Company's cost recovery mechanism for its demand-side management and energy efficiency programs. If applicable, this response should identify the incentive rate that is comparable to the 11.50% and 11.75% PPI as employed by DEC and DEP in their respective mechanisms. In addition, please identify the Docket or Case number associated with DEF's most recent cost recovery proceeding for its demand-side management and energy efficiency programs.

Response:

The Company objects to this question on the grounds that it is not relevant to this matter. The North Carolina Code of Conduct, as stipulated to by the Public Staff and Duke Energy and most recently approved by the North Carolina Utilities Commission in Docket Nos. E-2, Sub 1095A, E-7, Sub 1100A, and G-9, Sub 682A, provides that Duke Energy Corporation's affiliates "shall operate independently of each other" and "shall maintain separate books and records." *Order Granting Motion to Amend Regulatory Conditions*, issued Aug. 24, 2018 Appendix A, p. 48, Therefore the components of Duke Energy Florida's EE/DSM mechanism, which is based on Florida's comprehensive legal and regulatory landscape, is not relevant or related to this specific North Carolina proceeding. Additionally, the documents in the Florida proceeding are publicly available. The objection notwithstanding, and without waiving said objection, the Company responds as follows:

Duke Energy Florida's approved energy efficiency mechanism allows it to recover its program costs and earn allowed return on capital expenditures. Its most recent cost recovery proceeding, which is publicly available, was filed in Docket No. 20190002-EG and is available through: <http://www.psc.state.fl.us/ClerkOffice/Docket>

NC Public Staff
Docket No. E-7, Sub 1032
Docket No. E-2, Sub 931
Data Request No. 2
Item No. 2-2
Page 1 of 1

DUKE ENERGY CAROLINAS, LLC and DUKE ENERGY PROGRESS, LLC

Request:

Please provide a narrative on the level of incentives and compensation for lost revenues available to Duke Energy Indiana (DEI) associated with the Company's cost recovery mechanism for its demand-side management and energy efficiency programs. If applicable, this response should identify the incentive rate that is comparable to the 11.50% and 11.75% PPI as employed by DEC and DEP in their respective mechanisms. In addition, please identify the Docket or Case number associated with DEI's most recent cost recovery proceeding for its demand-side management and energy efficiency programs.

Response:

The Company objects to this question on the grounds that it is not relevant to this matter. The North Carolina Code of Conduct provides that Duke Energy Corporation's affiliates "shall operate independently of each other" and "shall maintain separate books and records." (Please refer to the Companies' response to PSDR 2-1) Therefore the components of Duke Energy Indiana's EE/DSM mechanism, which is based on Indiana's comprehensive legal and regulatory landscape, is not relevant or related to this specific North Carolina proceeding. Additionally, the documents in the Indiana proceeding are publicly available. The objection notwithstanding, and without waiving said objection, the Company responds as follows:

Duke Energy's Indiana's EE/DSM cost recovery mechanism allows it to recover its program costs, earn shared savings ranging from 0% to 10%, and recover the lost revenues associated with the life of the measure savings. Its most recent cost recovery proceeding was filed in Docket No. 43955 and is available through <https://iurc.portal.in.gov/advanced-search/>.

NC Public Staff
Docket No. E-7, Sub 1032
Docket No. E-2, Sub 931
Data Request No. 2
Item No. 2-3
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DUKE ENERGY CAROLINAS, LLC and DUKE ENERGY PROGRESS, LLC

Request:

Please provide a narrative on the level of incentives and compensation for lost revenues available to Duke Energy Kentucky (DEK) associated with the Company's cost recovery mechanism for its demand-side management and energy efficiency programs. If applicable, this response should identify the incentive rate that is comparable to the 11.50% and 11.75% PPI as employed by DEC and DEP in their respective mechanisms. In addition, please identify the Docket or Case number associated with DEK's most recent cost recovery proceeding for its demand-side management and energy efficiency programs.

Response:

The Company objects to this question on the grounds that it is not relevant to this matter. The North Carolina Code of Conduct provides that Duke Energy Corporation's affiliates "shall operate independently of each other" and "shall maintain separate books and records." (Please refer to the Companies' response to PSDR 2-1) Therefore the components of Duke Energy Kentucky's EE/DSM mechanism, which is based on Kentucky's comprehensive legal and regulatory landscape, is not relevant or related to this specific North Carolina proceeding. Additionally, the documents in the Kentucky proceeding are publicly available. The objection notwithstanding, and without waiving said objection, the Company responds as follows:

Duke Energy Kentucky's approved energy efficiency mechanism allows it to recover its program costs, earn 10% shared savings, and recover up to 36 months of lost revenues. Its most recent cost recovery recent cost recovery proceeding was filed in Case No. 2018-00370 and is available through: https://psc.ky.gov/PSC_WebNet/SearchCases.aspx

NC Public Staff
Docket No. E-7, Sub 1032
Docket No. E-2, Sub 931
Data Request No. 2
Item No. 2-4
Page 1 of 1

DUKE ENERGY CAROLINAS, LLC and DUKE ENERGY PROGRESS, LLC

Request:

Please provide a narrative on the level of incentives and compensation for lost revenues available to Duke Energy Ohio (DEO) associated with the Company's cost recovery mechanism for its demand-side management and energy efficiency programs. If applicable, this response should identify the incentive rate that is comparable to the 11.50% and 11.75% PPI as employed by DEC and DEP in their respective mechanisms. In addition, please identify the Docket or Case number associated with DEO's most recent cost recovery proceeding for its demand-side management and energy efficiency programs.

Response:

The Company objects to this question on the grounds that it is not relevant to this matter. The North Carolina Code of Conduct provides that Duke Energy Corporation's affiliates "shall operate independently of each other" and "shall maintain separate books and records." (Please refer to the Companies' response to PS DR 2-1) Therefore the components of Duke Energy Ohio's EE/DSM mechanism, which is based on Ohio's comprehensive legal and regulatory landscape, is not relevant or related to this specific North Carolina proceeding. Additionally, the documents in the Ohio proceeding are publicly available. The objection notwithstanding, and without waiving said objection, the Company responds as follows:

Duke Energy Ohio's approved energy efficiency mechanism allows it to recover its program costs, earn shared savings ranging from 0% to 13%, and recover up to 36 months of lost distribution revenue from those customer classes not participating the Company's revenue decoupling pilot. Its most recent cost recovery proceeding was filed in Case No. 19-622-EL-RDR and is available through: <http://dis.puc.state.oh.us/>

Evans Exhibit 2, page 1

Duke Energy Progress
For the Period January 1, 2015 - December 31, 2019
Docket Number E-2, Sub 1174
North Carolina Net Lost Revenue for Vintages 2015 - 2019

Line	Residential	Vintage 2014		2016(a)	2017(a)	2018(a)	2019	Total
		2014	2015					
1	Appliance Recycling Program	\$ 120,357	\$ 258,341	\$ 257,297	\$ 138,135	\$ -	\$ -	\$ 774,131
2	Home Energy Improvement Program	\$ 169,864	\$ 271,941	\$ 270,841	\$ 103,462	\$ -	\$ -	\$ 816,108
3	Residential Lighting Program	\$ 2,967,804	\$ 5,441,135	\$ 5,401,532	\$ 2,897,296	\$ -	\$ -	\$ 16,707,768
4	Neighborhood Energy Saver Program	\$ 37,747	\$ 79,192	\$ 78,872	\$ 41,516	\$ -	\$ -	\$ 237,327
5	Residential New Construction	\$ 184,096	\$ 271,509	\$ 270,412	\$ 89,208	\$ -	\$ -	\$ 815,226
6	Residential Energy Efficient Benchmarking	\$ 809,163	\$ (4,268)	\$ -	\$ -	\$ -	\$ -	\$ 804,895
7	Net Lost Residential Revenues	\$ 4,289,032	\$ 6,317,851	\$ 6,278,954	\$ 3,269,618	\$ -	\$ -	\$ 20,155,455

Line	Non-Residential	Vintage 2014		2016(a)	2017(a)	2018(a)	2019	Total
		2014	2015					
8	Energy Efficiency for Business	\$ 1,442,220	\$ 2,222,371	\$ 2,235,683	\$ 809,474	\$ -	\$ -	\$ 6,709,748
9	Small Business Energy Saver Program	\$ 749,923	\$ 1,496,288	\$ 1,505,249	\$ 756,072	\$ -	\$ -	\$ 4,507,530
10	Non-Residential Lighting Program	\$ 1,163,089	\$ 2,064,379	\$ 2,069,735	\$ 1,108,056	\$ -	\$ -	\$ 6,395,259
11	Net Lost Non-Residential Revenues	\$ 3,345,232	\$ 5,783,036	\$ 5,810,667	\$ 2,673,603	\$ -	\$ -	\$ 17,612,537

Line	Residential	Vintage 2015 updated 5/30/2018		2016(a)	2017(a)	Jan-Mar 15 2018	2019	Total
		2014	2015					
1	Appliance Recycling Program		\$ 123,909	\$ 238,215	\$ 246,008	\$ 46,185	\$ -	\$ 654,317
2	Energy Education Program for Schools		\$ 71,588	\$ 120,886	\$ 124,841	\$ 24,481	\$ -	\$ 341,797
3	Energy Efficient Lighting		\$ 1,665,788	\$ 3,332,098	\$ 3,441,107	\$ 536,645	\$ -	\$ 8,975,638
4	Home Energy Improvement Program		\$ 170,038	\$ 347,916	\$ 359,298	\$ 65,009	\$ -	\$ 942,260
5	Multi-Family		\$ 429,296	\$ 909,897	\$ 939,665	\$ 182,284	\$ -	\$ 2,461,122
6	My Home Energy Report		\$ 4,024,242	\$ -	\$ -	\$ -	\$ -	\$ 4,024,242
7	Neighborhood Energy Saver		\$ 54,534	\$ 89,993	\$ 92,937	\$ 15,285	\$ -	\$ 252,729
8	Residential New Construction		\$ 252,450	\$ 390,785	\$ 403,570	\$ 54,943	\$ -	\$ 1,101,749
9	Save Energy and Water Kit		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10	Total Lost Revenues	\$ -	\$ 6,791,845	\$ 5,429,790	\$ 5,607,426	\$ 924,793	\$ -	\$ 18,753,854
11	Found Residential Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
12	Net Lost Residential Revenues	\$ -	\$ 6,791,845	\$ 5,429,790	\$ 5,607,426	\$ 924,793	\$ -	\$ 18,753,854

Line	Non-Residential	Vintage 2015		2016(a)	2017(a)	2018	2019	Total
		2014	2015					
13	Energy Efficiency for Business		\$ 1,386,578	\$ 2,353,629	\$ 2,443,707	\$ 374,092	\$ -	\$ 6,558,006
14	Energy Efficient Lighting		\$ 420,420	\$ 846,915	\$ 879,329	\$ 126,026	\$ -	\$ 2,272,690
15	Small Business Energy Saver		\$ 737,092	\$ 1,703,045	\$ 1,768,224	\$ 315,792	\$ -	\$ 4,524,153
16	EnergyWise for Business		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
17	Total Lost Revenues	\$ -	\$ 2,544,090	\$ 4,903,589	\$ 5,091,260	\$ 815,910	\$ -	\$ 13,354,849
18	Found Non-Residential Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
19	Net Lost Non-Residential Revenues	\$ -	\$ 2,544,090	\$ 4,903,589	\$ 5,091,260	\$ 815,910	\$ -	\$ 13,354,849

Line	DSDR	Vintage 2015		2016(a)	2017(a)	2018	2019	Total
		2014	2015					
20	DSDR	\$ -	\$ 420,831	\$ 145,979	\$ -	\$ -	\$ -	\$ 566,810

Line	Residential	Vintage 2016		2016(a)	2017(a)	Jan-Mar 15 2018	2019	Total
		2014	2015					
1	Appliance Recycling Program			\$ 5,095	\$ 12,308	\$ 2,515	\$ -	\$ 19,918
2	Energy Education Program for Schools			\$ 69,240	\$ 135,532	\$ 27,693	\$ -	\$ 222,465
3	Energy Efficient Lighting			\$ 1,033,814	\$ 2,116,981	\$ 432,565	\$ -	\$ 3,583,361
4	Home Energy Improvement Program			\$ 163,848	\$ 370,108	\$ 75,625	\$ -	\$ 609,580
5	My Home Energy Report			\$ 5,418,524	\$ -	\$ 134,484	\$ -	\$ 5,553,007
6	Neighborhood Energy Saver			\$ 44,319	\$ 105,283	\$ 21,513	\$ -	\$ 149,602
7	Multi-Family			\$ 332,768	\$ 658,165	\$ -	\$ -	\$ 1,012,445
8	Residential Energy Assessments			\$ 74,198	\$ 222,923	\$ 45,550	\$ -	\$ 342,671
9	Residential New Construction			\$ 298,122	\$ 670,358	\$ 136,975	\$ -	\$ 1,105,455
10	Save Energy and Water Kit			\$ 362,685	\$ 967,169	\$ 201,709	\$ -	\$ 1,551,563
11	Total Lost Revenues	\$ -	\$ -	\$ 7,792,613	\$ 5,278,826	\$ 1,078,628	\$ -	\$ 14,150,067
12	Found Residential Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13	Net Lost Residential Revenues	\$ -	\$ -	\$ 7,792,613	\$ 5,278,826	\$ 1,078,628	\$ -	\$ 14,150,067

Line	Non-Residential	Vintage 2016		2016(a)	2017(a)	2018	2019	Total
		2014	2015					
14	Business Energy Reports			\$ 191,245	\$ -	\$ -	\$ -	\$ 191,245
15	Energy Efficiency for Business			\$ 1,638,505	\$ 3,101,812	\$ 632,371	\$ -	\$ 5,372,689
16	Energy Efficient Lighting			\$ 246,438	\$ 478,231	\$ 97,498	\$ -	\$ 822,166
17	Small Business Energy Saver			\$ 1,100,746	\$ 2,221,654	\$ 452,932	\$ -	\$ 3,775,332
18	EnergyWise for Business			\$ 7,298	\$ 19,733	\$ 4,023	\$ -	\$ 31,054
19	Total Lost Revenues	\$ -	\$ -	\$ 3,184,232	\$ 5,821,430	\$ 1,186,824	\$ -	\$ 10,192,486
20	Found Non-Residential Revenues	\$ -	\$ -	\$ (68,561)	\$ (113,553)	\$ (113,553)	\$ -	\$ (295,666)
21	Net Lost Non-Residential Revenues	\$ -	\$ -	\$ 3,115,672	\$ 5,707,877	\$ 1,073,272	\$ -	\$ 9,896,820

Line	DSDR	Vintage 2016		2016(a)	2017(a)	2018	2019	Total
		2014	2015					
22	DSDR	\$ -	\$ -	\$ 115,745	\$ 66,983	\$ -	\$ -	\$ 182,728

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Evans Exhibit 2, page 2

Line	Residential	Vintage 2017			2018	2019	Total
		2014	2015	2016(a)			
1	Appliance Recycling Program				\$ -	\$ -	\$ -
2	Energy Education Program for Schools				\$ 75,158	\$ 122,660	\$ 320,680
3	Energy Efficient Lighting				\$ 649,785	\$ 1,541,746	\$ 3,735,818
4	Home Energy Improvement Program				\$ 235,278	\$ 420,443	\$ 1,076,856
5	Multi-Family				\$ 458,691	\$ 900,109	\$ 2,260,393
6	My Home Energy Report				\$ 6,016,176	\$ -	\$ 6,016,176
7	Neighborhood Energy Saver				\$ 42,581	\$ 89,418	\$ 221,565
8	Residential Energy Assessments				\$ 147,827	\$ 278,204	\$ 704,694
9	Residential New Construction				\$ 425,229	\$ 839,386	\$ 2,105,383
10	Save Energy and Water Kit				\$ 754,565	\$ 1,340,146	\$ 3,437,064
11	Total Lost Revenues	\$ -	\$ -	\$ -	\$ 8,805,290	\$ 5,532,112	\$ 19,878,629
12	Found Residential Revenues				\$ -	\$ -	\$ -
13	Net Lost Residential Revenues	\$ -	\$ -	\$ -	\$ 8,805,290	\$ 5,532,112	\$ 19,878,629

Line	Non-Residential	Vintage 2017			2018	2019	Total
		2014	2015	2016(a)			
14	Business Energy Report			\$ 577	\$ -	\$ -	\$ 577
15	Energy Efficiency for Business			\$ 2,392,469	\$ 4,469,059	\$ 4,466,854	\$ 11,328,382
16	Energy Efficient Lighting			\$ 173,636	\$ 406,847	\$ 407,517	\$ 988,000
17	Small Business Energy Saver			\$ 1,079,154	\$ 1,987,679	\$ 1,986,908	\$ 5,053,741
18	Non-Res SmartSaver Performance			\$ 8,952	\$ 21,025	\$ 21,017	\$ 50,993
19	EnergyWise for Business			\$ 29,965	\$ 46,791	\$ 46,773	\$ 123,529
20	Total Lost Revenues	\$ -	\$ -	\$ -	\$ 6,931,401	\$ 6,929,068	\$ 17,545,222
21	Found Non-Residential Revenues	\$ -	\$ -	\$ -	\$ (72,644)	\$ (106,296)	\$ (285,236)
22	Net Lost Non-Residential Revenues	\$ -	\$ -	\$ -	\$ 6,825,105	\$ 6,822,772	\$ 17,259,986

Line	DSDR	Vintage 2017			2018	2019	Total
		2014	2015	2016(a)			
22	DSDR	\$ -	\$ -	\$ -	\$ 65,125	\$ 2,329	\$ 67,453

Line	Residential	Vintage 2018			2018 (a)	2019	Total
		2014	2015	2016(a)			
1	Appliance Recycling Program				\$ 59,966	\$ -	\$ 59,966
2	Energy Education Program for Schools				\$ 39,410	\$ 99,626	\$ 139,037
3	Energy Efficient Lighting				\$ 618,478	\$ 1,172,842	\$ 1,789,321
4	Home Energy Improvement Program				\$ 74,905	\$ 193,400	\$ 268,305
5	My Home Energy Report				\$ 7,382,388	\$ -	\$ 7,382,388
6	Neighborhood Energy Saver				\$ 55,190	\$ 103,639	\$ 158,829
7	Multi-Family Energy Efficiency				\$ 379,048	\$ 769,220	\$ 1,148,268
8	Residential Energy Assessments				\$ 77,398	\$ 140,525	\$ 217,923
9	Residential New Construction				\$ 439,985	\$ 888,107	\$ 1,328,092
10	Save Energy and Water Kit				\$ 591,129	\$ 1,495,300	\$ 2,086,429
11	Total Lost Revenues	\$ -	\$ -	\$ -	\$ 9,715,899	\$ 4,862,660	\$ 14,578,558
12	Found Residential Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13	Net Lost Residential Revenues	\$ -	\$ -	\$ -	\$ 9,715,899	\$ 4,862,660	\$ 14,578,558

Line	Non-Residential	Vintage 2018			2018 (a)	2019	Total
		2014	2015	2016(a)			
14	Business Energy Reports				\$ -	\$ -	\$ -
15	Energy Efficiency for Business				\$ 832,065	\$ 1,771,404	\$ 2,603,469
16	Energy Efficient Lighting				\$ 163,369	\$ 250,652	\$ 414,021
17	Non-Residential Smart Saver Performance Incentive				\$ -	\$ 71,032	\$ 71,032
18	Small Business Energy Saver				\$ 1,166,751	\$ 2,196,937	\$ 3,363,688
19	EnergyWise ® for Business				\$ 47,865	\$ 34,279	\$ 82,144
20	Total Lost Revenues	\$ -	\$ -	\$ -	\$ 2,210,049	\$ 4,324,304	\$ 6,534,354
21	Found Non-Residential Revenues	\$ -	\$ -	\$ -	\$ (78,327)	\$ (144,767)	\$ (223,094)
22	Net Lost Non-Residential Revenues	\$ -	\$ -	\$ -	\$ 2,131,722	\$ 4,179,537	\$ 6,311,259

(a) Lost revenues were estimated by applying forecasted lost revenue rates for residential and non-residential customers to state specific forecasted program participation.

Line	Residential	Vintage 2019			2018 (a)	2019	Total
		2014	2015	2016(a)			
1	Appliance Recycling Program				\$ -	\$ -	\$ -
2	Energy Education Program for Schools				\$ 45,488	\$ 45,488	\$ 45,488
3	Energy Efficient Lighting				\$ 660,301	\$ 660,301	\$ 660,301
4	Home Energy Improvement Program				\$ 109,946	\$ 109,946	\$ 109,946
5	My Home Energy Report				\$ 6,365,499	\$ 6,365,499	\$ 6,365,499
6	Neighborhood Energy Saver				\$ 54,545	\$ 54,545	\$ 54,545
7	Multi-Family Energy Efficiency				\$ 456,925	\$ 456,925	\$ 456,925
8	Residential Energy Assessments				\$ 77,791	\$ 77,791	\$ 77,791
9	Residential New Construction				\$ 47,875	\$ 47,875	\$ 47,875
10	Save Energy and Water Kit				\$ 912,388	\$ 912,388	\$ 912,388
11	Total Lost Revenues	\$ -	\$ -	\$ -	\$ -	\$ 8,730,758	\$ 8,730,758
12	Found Residential Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13	Net Lost Residential Revenues	\$ -	\$ -	\$ -	\$ -	\$ 8,730,758	\$ 8,730,758

Line	Non-Residential	Vintage 2019			2018 (a)	2019	Total
		2014	2015	2016(a)			
14	Business Energy Reports				\$ -	\$ -	\$ -
15	Energy Efficiency for Business				\$ -	\$ 1,003,105	\$ 1,003,105
16	Energy Efficient Lighting				\$ -	\$ 174,071	\$ 174,071
17	Non-Residential Smart Saver Performance Incentive				\$ -	\$ 120,492	\$ 120,492
18	Small Business Energy Saver				\$ -	\$ 960,827	\$ 960,827
19	EnergyWise ® for Business				\$ -	\$ 32,780	\$ 32,780
20	Total Lost Revenues	\$ -	\$ -	\$ -	\$ -	\$ 2,291,275	\$ 2,291,275
21	Found Non-Residential Revenues	\$ -	\$ -	\$ -	\$ -	\$ (79,389)	\$ (79,389)
22	Net Lost Non-Residential Revenues	\$ -	\$ -	\$ -	\$ -	\$ 2,211,886	\$ 2,211,886

Duke Energy Progress
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North Carolina Net Lost Revenue True Up for Vintages 2015 - 2016

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Line	Residential	Vintage 2015 as Filed Lost Revenue kWh \$				
		2015	2016(a)	2017(a)	2018	Total
1	Appliance Recycling Program	\$ 123,909	\$ 736,215	\$ 227,380	\$ -	\$ 586,605
2	Energy Education Program for Schools	\$ 82,859	\$ 108,148	\$ 101,267	\$ -	\$ 270,272
3	Energy Efficient Lighting	\$ 1,665,788	\$ 3,332,098	\$ 4,238,474	\$ -	\$ 9,236,360
4	Home Energy Improvement Program	\$ 170,038	\$ 347,816	\$ 331,043	\$ -	\$ 848,996
5	Multi-Family	\$ 458,493	\$ 971,916	\$ 847,358	\$ -	\$ 2,276,747
6	My Home Energy Report	\$ 6,020,104	\$ -	\$ -	\$ -	\$ 6,020,104
7	Neighborhood Energy Saver	\$ 54,534	\$ 89,893	\$ 73,350	\$ -	\$ 217,877
8	Residential New Construction	\$ 212,648	\$ 329,015	\$ 314,051	\$ -	\$ 855,612
9	Save Energy and Water Kit	\$ -	\$ -	\$ -	\$ -	\$ -
10	Lost Residential Revenues	\$ 7,766,241	\$ 5,415,298	\$ 6,132,933	\$ -	\$ 19,314,472
11	Found Residential Revenues	\$ -	\$ -	\$ -	\$ -	\$ -
12	Net Lost Residential Revenues	\$ 7,766,241	\$ 5,415,298	\$ 6,132,933	\$ -	\$ 19,314,472
Non-Residential						
		2015	2016(a)	2017(a)	2018	Total
13	Energy Efficiency for Business	\$ 1,365,678	\$ 2,353,629	\$ 2,229,685	\$ -	\$ 5,969,892
14	Energy Efficient Lighting	\$ 420,420	\$ 846,815	\$ 1,621,916	\$ -	\$ 2,889,251
15	Small Business Energy Saver	\$ 737,092	\$ 1,703,045	\$ 1,613,361	\$ -	\$ 4,053,498
16	EnergyWise for Business	\$ -	\$ -	\$ 69	\$ -	\$ 69
17	Net Lost Non-Residential Revenues	\$ 2,544,090	\$ 4,903,589	\$ 5,465,031	\$ -	\$ 12,912,710
18	Found Non-Residential Revenues	\$ -	\$ -	\$ -	\$ -	\$ -
19	Net Lost Non-Residential Revenues	\$ 2,544,090	\$ 4,903,589	\$ 5,465,031	\$ -	\$ 12,912,710
DSDR						
		2015	2016(a)	2017(a)	2018	Total
20	DSDR	\$ 420,831	\$ 145,979	\$ -	\$ -	\$ 566,810
Vintage 2016 as Filed Lost Revenue kWh \$						
		2015	2016(a)	2017(a)	2018	Total
1	Appliance Recycling Program	\$ -	\$ 6,095	\$ 203,747	\$ -	\$ 208,843
2	Energy Education Program for Schools	\$ -	\$ 52,016	\$ 97,012	\$ -	\$ 149,028
3	Energy Efficient Lighting	\$ -	\$ 1,033,814	\$ 2,263,342	\$ -	\$ 3,287,166
4	Home Energy Improvement Program	\$ -	\$ 163,889	\$ 122,724	\$ -	\$ 286,613
5	My Home Energy Report	\$ -	\$ 6,776,038	\$ -	\$ -	\$ 6,776,038
6	Neighborhood Energy Saver	\$ -	\$ 44,319	\$ 84,264	\$ -	\$ 128,573
7	Multi-Family	\$ -	\$ 351,415	\$ 535,662	\$ -	\$ 887,077
8	Residential Energy Assessments	\$ -	\$ 74,198	\$ 61,526	\$ -	\$ 135,723
9	Residential New Construction	\$ -	\$ 294,653	\$ 436,338	\$ -	\$ 730,991
10	Save Energy and Water Kit	\$ -	\$ 332,810	\$ 621,659	\$ -	\$ 954,269
11	Lost Residential Revenues	\$ -	\$ 9,138,049	\$ 4,416,263	\$ -	\$ 13,554,312
12	Found Residential Revenues	\$ -	\$ -	\$ -	\$ -	\$ -
13	Net Lost Residential Revenues	\$ -	\$ 9,138,049	\$ 4,416,263	\$ -	\$ 13,554,312
Non-Residential						
		2015	2016(a)	2017(a)	2018	Total
11	Business Energy Reports	\$ -	\$ -	\$ -	\$ -	\$ -
12	Energy Efficiency for Business	\$ 1,638,561	\$ 1,895,405	\$ -	\$ -	\$ 3,533,966
13	Energy Efficient Lighting	\$ 245,438	\$ 1,251,716	\$ -	\$ -	\$ 1,496,155
14	Small Business Energy Saver	\$ 1,107,111	\$ 1,957,986	\$ -	\$ -	\$ 3,065,097
15	EnergyWise for Business	\$ 18,814	\$ 27,113	\$ -	\$ -	\$ 45,927
16	Net Lost Non-Residential Revenues	\$ -	\$ 3,010,924	\$ 4,732,221	\$ -	\$ 7,743,145
17	Found Non-Residential Revenues	\$ -	\$ (89,561)	\$ (113,653)	\$ -	\$ (203,214)
18	Net Lost Non-Residential Revenues	\$ -	\$ 2,942,363	\$ 4,618,568	\$ -	\$ 7,560,931
DSDR						
		2015	2016(a)	2017(a)	2018	Total
19	DSDR	\$ 115,745	\$ 66,983	\$ -	\$ -	\$ 182,728

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North Carolina Net Lost Revenue True Up for Vintages 2015 - 2016

Line	Residential	Vintage 2015 True Up Lost Revenue kWh \$				Total
		2015	2016(a)	2017(a)	2018	
1	Appliance Recycling Program	\$ 123,909	\$ 238,215	\$ 246,008	\$ 46,185	\$ 654,317
2	Energy Education Program for Schools	\$ 71,588	\$ 120,888	\$ 124,841	\$ 24,481	\$ 341,797
3	Energy Efficient Lighting	\$ 1,665,788	\$ 3,332,098	\$ 3,441,107	\$ 538,645	\$ 8,975,638
4	Home Energy Improvement Program	\$ 170,038	\$ 347,916	\$ 359,288	\$ 65,009	\$ 942,250
5	Multi-Family	\$ 429,298	\$ 909,897	\$ 939,669	\$ 182,264	\$ 2,461,122
6	My Home Energy Report	\$ 4,024,242	\$ -	\$ -	\$ -	\$ 4,024,242
7	Neighborhood Energy Saver	\$ 64,534	\$ 89,993	\$ 92,937	\$ 15,265	\$ 262,729
8	Residential New Construction	\$ 282,450	\$ 390,785	\$ 403,570	\$ 54,943	\$ 1,101,749
9	Save Energy and Water Kit	\$ -	\$ -	\$ -	\$ -	\$ -
10	Lost Residential Revenues	\$ 6,791,845	\$ 5,429,790	\$ 5,607,426	\$ 924,793	\$ 18,753,854
11	Found Residential Revenues	\$ -	\$ -	\$ -	\$ -	\$ -
12	Net Lost Residential Revenues	\$ 6,791,845	\$ 5,429,790	\$ 5,607,426	\$ 924,793	\$ 18,753,854
<hr/>						
Line	Non-Residential	Vintage 2016 True Up Lost Revenue kWh \$				Total
		2015	2016(a)	2017(a)	2018	
13	Energy Efficiency for Business	\$ 1,388,578	\$ 2,353,829	\$ 2,443,707	\$ 374,092	\$ 6,558,005.99
14	Energy Efficient Lighting	\$ 420,420	\$ 848,915	\$ 870,329	\$ 128,026	\$ 2,272,690.21
15	Small Business Energy Saver	\$ 737,092	\$ 1,703,045	\$ 1,768,224	\$ 315,782	\$ 4,524,152.76
16	EnergyWise for Business	\$ -	\$ -	\$ -	\$ -	\$ -
17	Net Lost Non-Residential Revenues	\$ 2,544,090	\$ 4,905,589	\$ 5,091,260	\$ 815,910	\$ 13,354,849
18	Found Non-Residential Revenues	\$ -	\$ -	\$ -	\$ -	\$ -
19	Net Lost Non-Residential Revenues	\$ 2,544,090	\$ 4,905,589	\$ 5,091,260	\$ 815,910	\$ 13,354,849
<hr/>						
20	OSDR	\$ 420,831	\$ 145,979	\$ -	\$ -	\$ 566,810
<hr/>						
Line	Residential	Vintage 2016 True Up Lost Revenue kWh \$				Total
		2015	2016(a)	2017(a)	2018	
1	Appliance Recycling Program	\$ -	\$ 6,095	\$ 12,308	\$ 2,515	\$ 19,918
2	Energy Education Program for Schools	\$ -	\$ 59,240	\$ 135,532	\$ 27,693	\$ 222,465
3	Energy Efficient Lighting	\$ -	\$ 1,033,814	\$ 2,116,981	\$ 432,585	\$ 3,583,381
4	Home Energy Improvement Program	\$ -	\$ 163,848	\$ 370,108	\$ 75,925	\$ 609,580
5	Multi-Family	\$ -	\$ 6,418,524	\$ -	\$ 134,484	\$ 6,553,007
6	Neighborhood Energy Saver	\$ -	\$ 44,319	\$ 105,283	\$ -	\$ 149,602
7	Residential Energy Assessments	\$ -	\$ 332,768	\$ 658,165	\$ 21,513	\$ 1,012,445
8	Residential New Construction	\$ -	\$ 74,158	\$ 222,923	\$ 45,550	\$ 342,631
9	Save Energy and Water Kit	\$ -	\$ 298,122	\$ 670,358	\$ 136,975	\$ 1,105,455
10	Lost Residential Revenues	\$ -	\$ 362,685	\$ 987,169	\$ 201,709	\$ 1,551,563
11	Found Residential Revenues	\$ -	\$ 7,792,613	\$ 5,278,826	\$ 1,078,628	\$ 14,150,067
12	Net Lost Residential Revenues	\$ -	\$ 7,792,613	\$ 5,278,826	\$ 1,078,628	\$ 14,150,067
<hr/>						
Line	Non-Residential	Vintage 2016 True Up Lost Revenue kWh \$				Total
		2015	2016(a)	2017(a)	2018	
11	Business Energy Reports	\$ -	\$ 191,245	\$ -	\$ -	\$ 191,244.69
12	Energy Efficiency for Business	\$ -	\$ 1,638,505	\$ 3,101,812	\$ 632,371	\$ 5,372,688.80
13	Energy Efficient Lighting	\$ -	\$ 246,438	\$ 478,231	\$ 87,498	\$ 822,166.50
14	Small Business Energy Saver	\$ -	\$ 1,100,746	\$ 2,221,654	\$ 452,832	\$ 3,775,331.83
15	EnergyWise for Business	\$ -	\$ 7,288	\$ 19,733	\$ 4,023	\$ 31,054.46
16	Net Lost Non-Residential Revenues	\$ -	\$ 3,184,232	\$ 5,821,430	\$ 1,186,824	\$ 10,192,486
17	Found Non-Residential Revenues	\$ -	\$ (88,581)	\$ (113,553)	\$ (113,553)	\$ (295,686)
18	Net Lost Non-Residential Revenues	\$ -	\$ 3,115,672	\$ 5,707,877	\$ 1,073,272	\$ 9,896,820
<hr/>						
19	OSDR	\$ -	\$ 115,745	\$ 68,983	\$ -	\$ 182,728

Duke Energy Progress
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North Carolina Net Lost Revenue True Up for Vintages 2015 - 2016

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Line	Residential	Vintage 2015 Variance Lost Revenue kWh \$				Total
		2015	2016(a)	2017(a)	2018	
1	Appliance Recycling Program	\$ -	\$ -	\$ 18,628	\$ 46,185	\$ 64,812
2	Energy Education Program for Schools	\$ 8,729	\$ 14,741	\$ 23,574	\$ 24,481	\$ 71,525
3	Energy Efficient Lighting	\$ -	\$ -	\$ (787,366)	\$ 536,545	\$ (250,821)
4	Home Energy Improvement Program	\$ -	\$ -	\$ 20,255	\$ 65,909	\$ 86,164
5	Multi-Family	\$ (27,168)	\$ (62,018)	\$ 92,297	\$ 182,264	\$ 185,375
6	My Home Energy Report	\$ (995,862)	\$ -	\$ -	\$ -	\$ (995,862)
7	Neighborhood Energy Saver	\$ -	\$ -	\$ 19,587	\$ 15,265	\$ 34,852
8	Residential New Construction	\$ 39,904	\$ 61,770	\$ 89,519	\$ 54,943	\$ 246,137
9	Save Energy and Water Kit	\$ -	\$ -	\$ -	\$ -	\$ -
10	Lost Residential Revenues	\$ (974,396)	\$ 14,493	\$ (525,507)	\$ 924,793	\$ (560,617)
11	Found Residential Revenues	\$ -	\$ -	\$ -	\$ -	\$ -
12	Net Lost Residential Revenues	\$ (974,396)	\$ 14,493	\$ (525,507)	\$ 924,793	\$ (560,617)
<hr/>						
Line	Non-Residential	Vintage 2015 Variance Lost Revenue kWh \$				Total
		2015	2016(a)	2017(a)	2018	
13	Energy Efficiency for Business	-	-	214,022	374,092	588,114
14	Energy Efficient Lighting	-	-	(742,587)	126,028	(616,559)
15	Small Business Energy Saver	-	-	154,863	315,792	470,655
16	EnergyWise for Business	-	-	(69)	-	(69)
17	Net Lost Non-Residential Revenues	0	0	(373,771)	815,910	442,139
18	Found Non-Residential Revenues	\$ -	\$ -	\$ -	\$ -	\$ -
19	Net Lost Non-Residential Revenues	\$ -	\$ -	\$ (373,771)	\$ 815,910	\$ 442,139
<hr/>						
Line	DSOR	Vintage 2015 Variance Lost Revenue kWh \$				Total
		2015	2016(a)	2017(a)	2018	
20	DSOR	-	-	-	-	-
<hr/>						
Line	Residential	Vintage 2016 Variance Lost Revenue kWh \$				Total
		2015	2016(a)	2017(a)	2018	
1	Appliance Recycling Program	\$ -	\$ -	\$ (191,440)	\$ 2,516	\$ (188,925)
2	Energy Education Program for Schools	\$ -	\$ 7,224	\$ 39,520	\$ 27,899	\$ 74,643
3	Energy Efficient Lighting	\$ -	\$ -	\$ (138,360)	\$ 432,565	\$ 294,205
4	Home Energy Improvement Program	\$ -	\$ (41)	\$ 247,384	\$ 75,825	\$ 322,967
5	My Home Energy Report	\$ -	\$ (1,357,515)	\$ -	\$ 134,484	\$ (1,223,032)
6	Neighborhood Energy Saver	\$ -	\$ -	\$ 21,028	\$ -	\$ 21,028
7	Multi-Family	\$ -	\$ (28,648)	\$ 122,503	\$ 21,513	\$ 115,368
8	Residential Energy Assessments	\$ -	\$ -	\$ 161,398	\$ 45,950	\$ 207,348
9	Residential New Construction	\$ -	\$ 3,469	\$ 234,020	\$ 136,975	\$ 374,464
10	Save Energy and Water Kit	\$ -	\$ 30,075	\$ 365,510	\$ 201,709	\$ 597,294
11	Lost Residential Revenues	\$ -	\$ (1,345,437)	\$ 862,563	\$ 1,078,628	\$ 595,755
12	Found Residential Revenues	\$ -	\$ -	\$ -	\$ -	\$ -
13	Net Lost Residential Revenues	\$ -	\$ (1,345,437)	\$ 862,563	\$ 1,078,628	\$ 595,755
<hr/>						
Line	Non-Residential	Vintage 2016 Variance Lost Revenue kWh \$				Total
		2015	2016(a)	2017(a)	2018	
11	Business Energy Reports	-	191,245	-	-	191,245
12	Energy Efficiency for Business	-	(56)	1,206,407	632,371	1,836,722
13	Energy Efficient Lighting	-	-	(773,480)	97,498	(675,982)
14	Small Business Energy Saver	-	(6,366)	603,666	452,932	1,110,235
15	EnergyWise for Business	-	(11,515)	(7,350)	4,623	(14,972)
16	Net Lost Non-Residential Revenues	0	173,308	1,049,209	1,146,824	2,469,341
17	Found Non-Residential Revenues	-	0	0	(113,553)	(113,553)
18	Net Lost Non-Residential Revenues	\$ -	\$ 173,308	\$ 1,049,209	\$ 1,033,271	\$ 2,355,788
<hr/>						
Line	DSOR	Vintage 2016 Variance Lost Revenue kWh \$				Total
		2015	2016(a)	2017(a)	2018	
19	DSOR	-	-	-	-	-

Duke Energy Carolinas, LLC
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North Carolina Net Lost Revenue for Vintages 2015 - 2020

Exhibit 2, page 1

Line	Residential	Vintage 2015						Total
		2015	2016	2017 ⁽⁴⁾	2018	2019	2020	
1	Residential Energy Assessments	\$ 283,788	\$ 477,738	\$ 473,182	\$ 163,880			\$ 1,398,597
2	My Home Energy Report	10,042,270	-	-	-			10,042,270
3	Energy Efficient Appliances and Devices	3,650,771	6,169,123	6,116,216	2,163,569			18,139,680
4	HVAC Energy Efficiency	132,089	234,967	232,892	91,744			691,692
5	Appliance Recycle Program	150,786	279,840	277,098	115,671			823,394
6	Income Qualified Energy Efficiency and Weatherization Assistance	69,833	152,201	150,742	68,856			441,633
7	Multi-Family Energy Efficiency	316,658	681,177	676,879	285,091			1,979,805
8	Energy Efficiency Education	89,806	220,572	218,470	89,897			618,746
9	Total Lost Revenues	11,801,010	8,215,618	8,145,479	2,978,708			34,140,816
10	Found Residential Revenues *	-	-	-	-			-
11	Net Lost Residential Revenues	\$ 11,801,010	\$ 8,215,618	\$ 8,145,479	\$ 2,978,708			\$ 34,140,816

Line	Non-Residential	Vintage 2015						Total
		2015	2016	2017 ⁽⁴⁾	2018	2019	2020	
12	Nonresidential Smart Saver Custom Energy Assessments	\$ 5,659	\$ 22,194	\$ 21,744	\$ 12,719			\$ 62,316
13	Non-Residential Smart Saver Custom	1,432,898	2,477,128	2,416,873	830,053			7,156,953
14	Energy Management Information Services	-	-	-	-			-
15	Non-Residential Smart Saver Energy Efficient Food Service Products	33,714	65,479	64,761	25,584			189,538
16	Non-Residential Smart Saver Energy Efficient HVAC Products	109,819	186,207	193,346	73,983			573,355
17	Non-Residential Smart Saver Energy Efficient Lighting Products	1,439,011	2,400,931	2,289,093	769,611			6,898,646
18	Non-Residential Smart Saver Energy Efficient Pumps and Drives Products	51,265	82,153	80,494	25,843			239,755
19	Non-Residential Smart Saver Energy Efficient IT Products	58,585	171,258	170,131	83,735			483,709
20	Non-Residential Smart Saver Energy Efficient Process Equipment Products	14,723	25,414	24,674	8,676			73,487
21	Smart Business Energy Saver	1,832,775	3,599,216	3,572,716	1,515,918			10,520,625
22	Smart Energy in Offices	178,960	387,139	-	-			566,099
23	EnergyWise for Business	-	-	-	-			-
24	Total Lost Revenues	5,157,409	9,429,119	8,833,331	3,346,104			26,765,963
25	Found Non-Residential Revenues *	-	-	-	-			-
26	Net Lost Non-Residential Revenues	\$ 5,157,409	\$ 9,429,119	\$ 8,833,331	\$ 3,346,104			\$ 26,765,963

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Line	Residential	Vintage 2016					Total
		2015	2016	2017 ^(a)	2018	2019	
27	Residential Energy Assessments		\$ 193,357	\$ 336,600	\$ 194,978		\$ 724,934
28	My Home Energy Report		13,052,806	-	-		13,052,806
29	Energy Efficient Appliances and Devices		2,655,348	5,787,926	3,353,196		11,896,469
30	HVAC Energy Efficiency		132,531	334,414	192,675		660,620
31	Appliance Recycle Program		5,096	8,147	4,719		17,961
32	Income Qualified Energy Efficiency and Weatherization Assistance		115,500	242,117	140,230		497,847
33	Multi-Family Energy Efficiency		347,362	498,540	402,459		1,248,361
34	Energy Efficiency Education		142,629	201,016	174,250		517,895
35	Total Lost Revenues		16,654,687	7,708,770	4,464,606		28,828,063
36	Found Residential Revenues *		-	-	-		-
37	Net Lost Residential Revenues		\$ -	\$ 16,654,687	\$ 7,708,770	\$ 4,464,606	\$ 28,828,063
Line	Non-Residential	Vintage 2016					Total
		2015	2016	2017 ^(a)	2018	2019	
38	Nonresidential Smart Saver Custom Energy Assessments		\$ 199,079	\$ 389,585	\$ 318,658		\$ 907,321
39	Non Residential Smart Saver Custom		914,009	1,703,790	1,398,549		4,016,348
40	Energy Management Information Services		-	-	-		-
41	Non Residential Smart Saver Energy Efficient Food Service Products		24,889	66,328	54,035		145,252
42	Non Residential Smart Saver Energy Efficient HVAC Products		45,952	103,028	83,640		232,620
43	Non Residential Smart Saver Energy Efficient Lighting Products		2,925,514	6,589,455	5,321,493		14,836,462
44	Non Residential Smart Saver Energy Efficient Pumps and Drives Products		36,898	66,558	54,453		159,908
45	Non Residential Smart Saver Energy Efficient IT Products		59,904	75,403	61,613		196,920
46	Non Residential Smart Saver Energy Efficient Process Equipment Products		4,731	10,652	8,811		24,194
47	Small Business Energy Saver		2,145,332	4,346,981	3,511,109		10,003,422
48	Smart Energy in Offices		227,060	418,553	-		645,616
49	Business Energy Report		-	-	-		-
50	EnergyWise for Business		15,922	36,788	29,439		82,148
51	Total Lost Revenues		6,602,693	19,807,121	10,841,999		37,251,813
52	Found Non-Residential Revenues *		-	-	-		-
53	Net Lost Non-Residential Revenues		\$ 6,602,693	\$ 19,807,121	\$ 10,841,999		\$ 37,251,813
Line	Residential	Vintage 2017					Total
		2015	2016	2017 ^(a)	2018	2019	
78	Residential Energy Assessments		\$ 158,264	\$ 274,951	\$ 366,739	\$ 75,609	\$ 915,563
79	My Home Energy Report		14,455,527	-	-	-	14,455,527
80	Energy Efficient Appliances and Devices		3,387,819	5,136,360	6,035,996	1,570,511	16,130,685
81	Residential - Smart Saver Energy Efficiency Program		202,125	274,608	433,059	73,486	983,268
82	Appliance Recycle Program		-	-	-	-	-
83	Income Qualified Energy Efficiency and Weatherization Assistance		141,450	210,612	243,487	63,120	657,669
84	Multi-Family Energy Efficiency		535,630	744,297	946,417	204,951	2,431,295
85	Energy Efficiency Education		165,283	221,302	279,849	57,294	723,688
86	Total Lost Revenues		19,086,098	6,862,220	8,904,587	2,045,671	36,900,575
87	Lost Revenue Decrement Pending Rate Case Implementation		-	-	-	-	-
88	Found Residential Revenues *		-	-	-	-	-
89	Net Lost Residential Revenues		\$ -	\$ 19,086,098	\$ 6,862,220	\$ 8,904,587	\$ 36,900,575
Line	Non-Residential	Vintage 2017					Total
		2015	2016	2017 ^(a)	2018	2019	
90	Nonresidential Smart Saver Custom Energy Assessments		\$ 220,191	\$ 358,289	\$ 355,010	\$ 139,226	\$ 1,072,725
91	Non Residential Smart Saver Custom		435,407	871,334	916,764	435,511	2,659,016
92	Energy Management Information Services		-	-	-	-	-
93	Non Residential Smart Saver Energy Efficient Food Service Products		28,410	40,771	69,785	12,596	151,142
94	Non Residential Smart Saver Energy Efficient HVAC Products		61,639	110,255	131,612	48,778	352,284
95	Non Residential Smart Saver Energy Efficient Lighting Products		6,200,869	10,299,304	8,730,546	4,144,248	29,374,967
96	Non Residential Smart Saver Energy Efficient Pumps and Drives Products		58,808	127,509	93,363	68,742	348,421
97	Non Residential Smart Saver Energy Efficient IT Products		82	162	186	81	512
98	Non Residential Smart Saver Energy Efficient Process Equipment Products		8,160	12,172	10,555	4,015	34,902
99	Non Residential Smart Saver Performance Incentive		66	774	818	686	2,344
100	Small Business Energy Saver		2,202,337	3,774,917	4,099,390	1,591,093	11,669,644
101	Smart Energy in Offices		209,310	149,382	-	-	358,692
102	Business Energy Report		-	-	-	-	-
103	EnergyWise for Business		85,268	159,514	162,762	76,100	483,644
104	Total Lost Revenues		9,511,547	15,903,393	14,570,381	6,519,975	46,505,295
105	Lost Revenue Decrement Pending Rate Case Implementation		-	-	-	-	-
106	Found Non-Residential Revenues *		-	-	-	-	-
107	Net Lost Non-Residential Revenues		\$ -	\$ 9,511,547	\$ 15,903,393	\$ 14,570,381	\$ 49,979,673

* Found Revenues - See Exhibit 4

(a) Lost revenues were estimated by applying forecasted lost revenue rates for residential and non-residential customers to state specific forecasted program participation.

Evans Exhibit 2, page 3

Line	Residential	Vintage 2018					2020	Total
		2015	2016	2017 ^(a)	2018	2019		
108	Residential Energy Assessments				\$ 204,104	\$ 353,963	\$ 353,514	\$ 911,581
109	My Home Energy Report				15,088,601	-	-	15,088,601
110	Energy Efficient Appliances and Devices				4,101,898	4,054,825	9,085,760	17,442,483
111	Residential - Smart Saver Energy Efficiency Program				171,045	213,538	337,373	721,976
112	Appliance Recycle Program				-	-	-	-
113	Income Qualified Energy Efficiency and Weatherization Assistance				130,558	246,384	252,056	629,937
114	Multi-Family Energy Efficiency				300,983	1,165,290	1,087,381	2,753,653
115	Energy Efficiency Education				122,869	260,025	231,584	614,478
116	Total Lost Revenues				20,520,118	6,254,025	11,348,568	38,162,710
117	Lost Revenue Decrement Pending Rate Case Implementation				-	-	1,611,124	1,611,124
118	Found Residential Revenues *				-	-	-	-
119	Net Lost Residential Revenues	\$ -	\$ -	\$ -	\$ 20,520,118	\$ 6,254,025	\$ 9,737,443	\$ 36,551,586

Line	Non-Residential	Vintage 2018					2020	Total
		2015	2016	2017 ^(a)	2018	2019		
120	Nonresidential Smart Saver Custom Energy Assessments				\$ 212	\$ 549,855	\$ 849	\$ 550,916
121	Non-Residential Smart Saver Custom				461,343	2,688,812	240,660	3,890,816
122	Energy Management Information Services				-	-	-	-
123	Non-Residential Smart Saver Energy Efficient Food Service Products				13,485	16,794	21,497	61,776
124	Non-Residential Smart Saver Energy Efficient HVAC Products				30,511	134,931	114,993	300,135
125	Non-Residential Smart Saver Energy Efficient Lighting Products				4,078,650	2,987,074	6,578,710	13,604,445
126	Non-Residential Smart Saver Energy Efficient Pumps and Drives Products				66,649	49,390	84,066	200,106
127	Non-Residential Smart Saver Energy Efficient IT Products				185	117,948	859	118,991
128	Non-Residential Smart Saver Energy Efficient Process Equipment Products				6,501	11,082	10,346	27,829
129	Non-Residential Smart Saver Performance Incentive				20,243	160,962	82,058	263,263
129	Small Business Energy Saver				1,772,873	3,493,883	3,374,219	8,640,976
130	Smart Energy in Offices				39,733	-	-	39,733
131	Business Energy Report				-	-	-	-
132	EnergyWise for Business				64,755	51,234	133,468	229,458
133	Total Lost Revenues				6,575,151	10,271,966	11,081,327	27,928,443
134	Lost Revenue Decrement Pending Rate Case Implementation				-	-	1,573,185	1,573,185
135	Found Non-Residential Revenues *				-	-	-	-
136	Net Lost Non-Residential Revenues	\$ -	\$ -	\$ -	\$ 6,575,151	\$ 10,271,966	\$ 9,508,142	\$ 26,355,258

* Found Revenues - See Evans Exhibit 4

(a) Lost revenues were estimated by applying forecasted lost revenue rates for residential and non-residential customers to state specific forecasted program participation.

Exhibit 2, page 4

Line	Residential	Vintage 2019		2016	2017 ^(d)	2018	2019	2020	Total
		2015	2016						
137	Residential Energy Assessments						\$ 178,309	\$ 287,735	\$ 466,044
138	My Home Energy Report						15,206,604	-	15,206,604
139	Energy Efficient Appliances and Devices						2,553,178	4,309,976	6,857,354
140	Residential - Smart Saver Energy Efficiency Program						129,065	158,904	287,969
141	Appliance Recycle Program						-	-	-
142	Income Qualified Energy Efficiency and Weatherization Assistance						99,388	185,634	285,022
143	Multi-Family Energy Efficiency						496,951	964,718	1,461,669
144	Energy Efficiency Education						115,659	261,545	381,044
145	Total Lost Revenues						18,783,204	6,102,513	24,885,717
146	Lost Revenue Decrement Pending Rate Case Implementation						866,357	-	866,357
147	Found Residential Revenues *						-	-	-
148	Net Lost Residential Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 18,783,204	\$ 6,102,513	\$ 24,885,717

Line	Non-Residential	Vintage 2019		2016	2017 ^(d)	2018	2019	2020	Total
		2015	2016						
149	Nonresidential Smart Saver Custom Energy Assessments						\$ 145,699	\$ 300,502	\$ 446,201
150	Non Residential Smart Saver Custom						1,059,600	2,335,850	3,395,450
151	Energy Management Information Services						-	-	-
152	Non Residential Smart Saver Energy Efficient Food Service Products						146,435	153,750	300,185
153	Non Residential Smart Saver Energy Efficient HVAC Products						191,528	322,214	515,742
154	Non Residential Smart Saver Energy Efficient Lighting Products						1,931,414	3,497,532	5,418,946
155	Non Residential Smart Saver Energy Efficient Pumps and Drives Products						77,800	214,313	292,113
156	Non Residential Smart Saver Energy Efficient IT Products						77,654	125,792	203,445
157	Non Residential Smart Saver Energy Efficient Process Equipment Products						18,722	39,135	57,857
158	Non Residential Smart Saver Performance Incentive						375,261	656,829	1,032,089
159	Small Business Energy Saver						1,523,101	2,471,538	3,994,639
160	Smart Energy in Offices						-	-	-
161	Business Energy Report						51,224	76,675	127,908
162	EnergyWise for Business						5,590,446	10,194,109	15,784,556
163	Total Lost Revenues						-	-	-
164	Lost Revenue Decrement Pending Rate Case Implementation						1,447,229	-	1,447,229
165	Found Non-Residential Revenues *						-	-	-
166	Net Lost Non-Residential Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,590,446	\$ 8,746,880	\$ 14,337,327

* Found Revenues - See Exhibit 4

(d) Lost revenues were estimated by applying forecasted lost revenue rates for residential and non-residential customers to state specific forecasted program participation.

Evans Exhibit 2, page 5

Line	Residential	Vintage 2020					Total
		2015	2016	2017 ^(N)	2018	2019	
166	Residential Energy Assessments					161,966	\$ 161,966
167	My Home Energy Report					14,686,468	14,686,468
168	Energy Efficient Appliances and Devices					1,238,379	1,238,379
169	Residential – Smart Saver Energy Efficiency Program					273,482	273,482
170	Appliance Recycle Program					-	-
171	Income Qualified Energy Efficiency and Weatherization Assistance					103,534	103,534
172	Multi-Family Energy Efficiency					496,663	496,663
173	Energy Efficiency Education					146,751	146,751
174	Total Lost Revenues	-	-	-	-	17,105,243	17,105,243
175	Lost Revenue Decrement Pending Rate Case Implementation					2,428,384	2,428,384
176	Found Residential Revenues *					-	-
177	Net Lost Residential Revenues	\$ -	\$ -	\$ -	\$ -	\$ 14,676,859	\$ 14,676,859

Line	Non-Residential	Vintage 2020					Total
		2015	2016	2017 ^(N)	2018	2019	
178	Nonresidential Smart Saver Custom Energy Assessments					\$ 136,414	\$ 136,414
179	Non Residential Smart Saver Custom					1,201,984	1,201,984
180	Energy Management Information Services					-	-
181	Non Residential Smart Saver Energy Efficient Food Service Products					93,624	93,624
182	Non Residential Smart Saver Energy Efficient HVAC Products					61,819	61,819
183	Non Residential Smart Saver Energy Efficient Lighting Products					3,029,908	3,029,908
184	Non Residential Smart Saver Energy Efficient Pumps and Drives Products					94,651	94,651
185	Non Residential Smart Saver Energy Efficient IT Products					6,639	6,639
186	Non Residential Smart Saver Energy Efficient Process Equipment Products					12,061	12,061
187	Non Residential Smart Saver Performance Incentive					402,902	402,902
187	Small Business Energy Saver					955,245	955,245
188	Smart Energy in Offices					-	-
189	Business Energy Report					-	-
190	EnergyWise for Business					46,148	46,148
191	Total Lost Revenues	-	-	-	-	6,041,394	6,041,394
192	Lost Revenue Decrement Pending Rate Case Implementation					857,680	857,680
193	Found Non-Residential Revenues *					-	-
194	Net Lost Non-Residential Revenues	\$ -	\$ -	\$ -	\$ -	\$ 5,183,714	\$ 5,183,714

* Found Revenues - See Evans Exhibit 4

(a) Lost revenues were estimated by applying forecasted lost revenue rates for residential and non-residential customers to state specific forecasted program participation.

NC Public Staff
Docket No. E-7, Sub 1032
Docket No. E-2, Sub 931
Data Request No. 2
Item No. 2-8
Page 1 of 1

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Jul 10 2019

DUKE ENERGY CAROLINAS, LLC and DUKE ENERGY PROGRESS, LLC

Request:

Given that both DEC and DEP are considered to be winter planning utilities, please explain the justification for applying the same avoided per KW capacity costs throughout the year; as opposed to employing a weighted avoided capacity cost that incorporates the same seasonal allocations of avoided capacity costs used in the recent avoided cost proceeding.

Response:

Consistent with the Commission's discussion and conclusions in its September 11, 2018 *Order Approving DSM/EE Rider and Requiring Customer Notice*, in Docket No. E-7, Sub 1164, the Companies recognize that evaluating the contributions that DSM/EE measures make to a utility avoiding future capacity needs differs from the evaluation undertaken to determine the capacity costs avoided through the purchase of electric output from the QF. Mindful of this distinction, the value of avoided capacity for EE and DR measures is derived from the cost of a peaker, independent of whether the peaker is used in the winter or the summer. Therefore, employing the same avoided per KW capacity cost throughout the year is the appropriate way to assign value to Avoided Capacity for EE and DR measures. The Companies do not currently, nor do they intend to attempt to claim Avoided Capacity savings that are the sum of both the Winter and the Summer Peak KW savings.