

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION
DOCKET NO. E-7, SUB 1164

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| In the Matter of: |) |
| Application of Duke Energy Carolinas, |) POST-HEARING BRIEF OF NORTH |
| LLC For Approval of Demand-Side |) CAROLINA JUSTICE CENTER, |
| Management and Energy Efficiency |) SOUTHERN ALLIANCE FOR CLEAN |
| Cost Recovery Rider Pursuant to G.S. |) ENERGY, AND NATURAL |
| 62-133.9 and Commission Rule R8-69 |) RESOURCES DEFENSE COUNCIL |

Pursuant to Rule R1-25 of the North Carolina Utilities Commission, the North Carolina Justice Center, the Southern Alliance for Clean Energy, and the Natural Resources Defense Council (collectively, “NC Justice Center et al”), respectfully file this post-hearing brief on Duke Energy Carolinas, LLC’s (“DEC” or “the Company”) application for approval of its annual demand-side management (“DSM”) and energy efficiency (“EE”) cost recovery and incentive rider for 2019 (“Rider 10”).

I. Introduction

Overall, NC Justice Center et al support DEC’s application and applaud the savings achieved by the Company’s portfolio of programs. The Company should be commended for achieving its highest savings to date and reaching the agreed-to savings-target of 1% of prior year sales for the first time. DEC continues to offer a wide array of programs and, in certain areas, provide state-of-the-art program design features.

The NC Justice Center et al continue to have concerns, however, with the Company’s: (1) over reliance on short-lived measures, particularly its residential behavioral program; (2) inadequate promotion of longer-lived measures and comprehensive treatment of buildings; (3) insufficient planning to offset a significant loss of lighting savings once the 2020 federal EISA efficiency standards go into effect; and (4) need to reach more lower-income communities and deliver programs that reach rental

units. The NC Justice Center et al filed the testimony of Chris Neme, Principal of the Energy Futures Group, who put forward a number of recommendations for overall improvements to DEC's programs and changes to more accurately calculate savings from the Company's major residential behavioral and lighting programs.¹ The Commission should order the Company to take up these issues in the Collaborative over the course of the next year. In order for the Collaborative to make progress on these substantive issues, NC Justice Center et al ask that the Commission adopt the recommendations put forward by Mr. Neme to make the Collaborative function more effectively.

In addition, NC Justice Center et al agree with the Company's plan to continue offering the Residential Energy Saver program, even though DEC is still working on making the program cost effective. NC Justice Center et al also agree with DEC's calculation of avoided capacity costs for purposes of establishing the Portfolio Performance Incentive and calculating cost-effectiveness. We ask the Commission to reject the Public Staff's request to assign zero capacity value to DEC's DSM/EE programs in 2019. Assigning a zero-capacity value to DEC's suite of cost-effective DSM/EE programs that carry on from year to year would discourage the Company from making investments that save ratepayers money in part because of the avoided need for the utility to build new capacity.

II. Duke Energy Carolinas Achieved its Target of One-Percent of Savings of Prior-Year Sales for the First Time and Shows Continued Promise for Providing Cost-Effective Benefits to All Customers

NC Justice Center et al commend DEC for the improved performance of its DSM and EE programs and for maintaining a highly cost-effective portfolio that benefits all of

¹ Without objection, Mr. Neme was excused from attending the hearing in person, and his testimony and exhibits were entered into the record as though given orally from the stand at the hearing. Tr. p. 85.

its customers. DEC delivered its highest DSM/EE portfolio savings in 2017, saving 854 gigawatt-hours (GWh).² This level of savings corresponds to 1.07 percent of prior-year sales,³ exceeding the one percent annual energy savings target to which the Company agreed in a settlement in the then-proposed merger of Duke Energy and Progress Energy (“Merger Settlement”) for the first time.⁴ Tr. pp. 92-93.

DEC’s application reveals positive trends in its portfolio and projected savings. First, DEC’s forecast of the amount of new annual savings its programs will produce in 2019 are equal to about 0.95 percent of total forecast sales and 1.38 percent of sales to non-opt-out customers. Second, the program portfolio is very cost-effective, producing \$2.46 in supply-cost savings for every dollar DEC has spent. Since 2014, DEC’s efficiency programs have saved enough energy at the time of system peak to eliminate the need for the equivalent of more than four natural gas “peaker” power plants. Third, the portfolio includes a wide range of efficiency measures and programs. Fourth, there are some national state-of-the-art program design features, particularly the Company’s recent launch of a midstream channel for promoting non-residential HVAC, lighting, food service, and IT measures. Tr. pp. 93-94.

NC Justice Center et al support the energy savings and system-cost reductions that have been achieved by the Company’s programs. Pursuant to the stipulation entered into between DEC, the Public Staff, and a number of clean-energy and environmental

² DEC reported 906.9 GWh of annual savings at the generator in 2017. That is a value for savings across both its North Carolina and South Carolina service territories. Adjusting for an average line loss rate of 6.2187 percent (DEC response to SACE 2-6) produces 853.8 GWh savings at customers’ meters.

³ Total DEC retail sales in both North Carolina and South Carolina were 79,643 GWh in 2016 [U.S. Energy Information Administration Form 861 Data, Table 10 (https://www.eia.gov/electricity/sales_revenue_price/index.php)].

⁴ The Merger Settlement with SACE, South Carolina Coastal Conservation League, and Environmental Defense Fund calls for annual energy savings of at least 1% of prior-year retail sales beginning in 2015 and cumulative savings of at least 7% over the period from 2014 through 2018. The Merger Settlement was approved by the Public Service Commission of South Carolina (“PSCSC”) in Docket No. 2011-158-E.

intervenors (including the Southern Alliance for Clean Energy and the Natural Resources Defense Council) in the Company's 2013 DSM/EE rider docket, the parties agreed that the revised "[Cost Recovery and Incentive] Mechanism...provides an incentive for the Company to offer all cost effective EE and DSM programs."⁵ NC Justice Center et al requests that DEC recommit itself to acquire *all* cost-effective EE and DSM program offerings, with a renewed emphasis on longer-lasting measures and measures that reach low-income customers, as set forth below.

III. A Technical Reference Manual Would Streamline the Evaluation of DEC's DSM/EE Portfolio

NC Justice Center et al ask that the Commission order the development of a Technical Reference Manual ("TRM"). A TRM documents all current assumptions regarding efficiency-measure energy savings, peak-demand savings, savings life, and incremental costs. Tr. p. 99. The absence of such a single reference document makes it more difficult to review the reasonableness of DEC's savings and net benefits claims. Tr. p. 100.

As pointed out by Mr. Neme, the vast majority of states – especially those with fairly robust efficiency-program offerings – have TRMs. *Id.* North Carolina should follow suit. This kind of manual would provide transparency regarding the basis for all utility-savings estimates, as well as other key inputs to cost-effectiveness calculations. That makes it easier for all parties to identify quickly when key assumptions may be outdated. That includes assumptions, such as savings life and incremental cost, which are often not addressed by impact evaluations. *Id.* Such assumptions are important inputs to

⁵ Agreement and Stipulation of Duke Energy Carolinas, LLC, the Environmental Defense Fund, the Natural Resources Defense Council, the North Carolina Sustainable Energy Association, the Public Staff, the South Carolina Coastal Conservation League, and the Southern Alliance for Clean Energy, N.C.U.C. Docket No. E-7, Sub 1032 (Aug. 19, 2013), pp. 7-8.

cost-effectiveness calculations and shareholder-incentive calculations. DEC witness Robert Evans did not object to the Collaborative establishing a working group that could be tasked with developing a TRM. Tr. p. 248.

IV. Programmatic Recommendations that Need Further Development in the Collaborative

A. Overreliance on residential behavioral programs

NC Justice et al remain concerned about DEC's overreliance on a single residential behavioral program, My Home Energy Report ("MyHER"), to achieve a large portion of its overall savings. Tr. pp. 113-17. Behavioral programs provide few long-term or deep savings. Mr. Neme's comparison to other investor owned utilities revealed that DEC's reliance on residential behavior programs to generate savings is unusual. DEC projects that 40% of its total overall savings in 2019 will come from MyHER alone. *Id.* None of the utilities in the comparison group come close to achieving such a large portion of total savings from their residential behavior programs as does DEC. The average non-DEC utility is getting only 9% of total portfolio electric savings from its residential behavior programs; the average of the other southern utilities surveyed is even less. Tr. p. 115.

Mr. Neme explained that such programs often have a low retention life and can struggle to keep pace with market changes. Overreliance on such programs could result in a decrease in future portfolio performance. While NC Justice Center et al appreciate the reported cost-savings from the MyHER program, DEC should do more to increase the percentage of its program offerings that offer deeper, longer-lasting savings.

B. Need to update savings assumptions to account for persistence of savings

In addition to over relying on the MyHER program, the Company is not properly accounting for the persistence of savings that likely continue for a time following program participation. Tr. pp. 101-04. DEC appears to assume that My Home Energy Report savings last only as long as a residential customer is receiving the reports. Tr. p. 101. As a result, DEC assumes that those savings have to be reacquired by re-running the program each year for the same participants. There is evidence that a significant portion of the savings produced from any set of customers participating in year one would continue to persist in subsequent years after program delivery ends. One study demonstrated that, on average, savings achieved during a program year decline by about 20 percent each year following program termination.⁶

As a result, DEC may be significantly over-estimating the *new* savings this program produces each year. Taking into account the persistence of savings significantly reduces the amount of new annual savings a utility can appropriately count from repeat participants. Tr. p. 103. Because the cost per participant does not change, accounting for those persistent savings could render the program not cost-effective if delivered to repeat participants. *Id.* It may make sense to adjust program design and delivery strategy to account for this persistence of savings. One option is to rotate delivery of residential behavior programs to different sets of customers each year, and not return to a group of customers until at least three or four years have passed since they last received MyHER. Tr. pp. 103-04.

⁶ Tr. p. 102 (citing Khawaja, Sami and James Stewart, *Long-Run Savings and Cost-Effectiveness of Home Energy Report Programs*, Cadmus Group, Inc. (Winter 2014/2015) (http://www.cadmusgroup.com/wp-content/uploads/2014/11/Cadmus_Home_Energy_Reports_Winter2014.pdf)).

NC Justice Center et al request that the Commission refer the issue of whether DEC should change its assumptions regarding the annual savings from MyHER to the Collaborative. More analysis should be done, considering the applicability of the results of other studies' estimates of savings persistence to DEC's program before making any specific changes. Tr. p. 104.

C. Need to update projected savings estimates from lightbulb programs given new federal lighting standards

DEC is assuming that the annual savings produced by a residential LED light bulb installed as a result of its efficiency programs will be realized every year—at the same level experienced in the first year—for each of the next 12 years. Tr. p. 105. These projections do not take into account new federal efficiency standards imposed by the Energy Independence and Security Act (EISA) for most residential light bulbs. Those standards will essentially mean that roughly 80 percent of the savings realized from most LED light bulbs will not be attributable to utility programs after 2020. Tr. p. 106. NC Justice Center et al concur with the concerns raised by Public Staff witness Williamson regarding the need for DEC to address the changing baseline for lightbulb efficiency as soon as possible. Tr. pp. 172-75.

Mr. Neme identified several issues that would need to be addressed before making adjustments to DEC's economic net-benefit calculations. Tr. pp. 110-11. But given how significant lighting savings are in DEC's overall portfolio, the Commission should order that this issue be taken up by the Collaborative for discussion, analysis, and recommendations on how to proceed before next year's DSM/EE rider application is filed.

D. More Emphasis on Measures that Deliver Longer-Lived Savings

With respect to the residential sector, Mr. Neme provided a number of recommendations designed to boost DEC's energy savings by expanding and enhancing existing programs, developing new programs, and targeting customer segments that remain relatively untapped. Tr. p. 117-21. Specifically, he recommended improvements to the Residential Smart Saver program, comprehensive home energy retrofit programs, an enhanced multifamily retrofit program, and new programs focused on manufactured housing and low-income households.

1. Strengthen the Residential Smart Saver EE Program

DEC should endeavor to improve participation in its Residential Smart Saver EE program significantly through establishment of a midstream channel for promoting some of the measures through equipment distributors, increasing incentives, enhancing marketing, and other means to reach more customers. Tr. pp. 117-18. For example, a Connecticut utility saw more than a six-fold increase in participation in its heat-pump water heater rebates when it moved rebates upstream to distributors.⁷ Changes in rebate levels, marketing strategies, paperwork requirements, options for financing investments (for example, through on-bill financing), or other program elements may also enable increases in participation. Tr. p.118.

NC Justice Center et al do not agree with the Public Staff's recommendation to terminate or suspend the Residential Smart Saver program, given its potential to achieve deep and long-lasting savings and given the Company's over reliance on behavioral

⁷ Tr. p. 118 (citing Jennifer Parsons, *Energize Connecticut Upstream Residential HVAC Program*, presented at the 2015 ACEEE National Conference on Energy Efficiency as a Resource in Little Rock, Arkansas (Sept. 2015) (http://aceee.org/sites/default/files/pdf/conferences/ee/2015/Jennifer_Parsons_Session4A_EER15_9.22.15.pdf).

programs. Tr. p. 188-92. In addition to the need for a more balanced portfolio that includes longer-lasting savings, disrupting the program would disrupt relationships with contractors. As DEC witness Robert Evans explained, suspending the program would disrupt the Trade Ally Network and make it difficult and more costly to restart at a later date when circumstances change or program delivery improves to bring the program up to cost-effectiveness standards. Tr. p. 280. It is important to preserve and improve, rather than discard, DEC's only residential program that addresses HVAC systems, the largest single energy-user in the home. Tr. pp. 189 & 245.

2. Imperative to reach more low-income customers and renters

As Mr. Neme testified, low-income customers are less likely to participate in EE programs because they usually offer rebates to defray, but not eliminate, the incremental cost of more efficient appliances. Tr. p. 122. Low-income customers can rarely afford to make any contribution to efficiency-measure costs. They are also more likely to be renters, who face greater barriers to efficiency program participation than home owners. In rental properties, including multi-family buildings, there is often a split-incentive problem. Tr. p. 123. Namely, the party who pays for making major investments in building envelop, HVAC, and appliance-efficiency measures – the landlord – is different than the party who reaps the resulting savings on their energy bills – the tenant. *Id.*

Second, low-income customers need the bill savings that result from energy-efficiency improvements more than other customers. Low-income households face higher energy burdens and energy bills can force trade-offs with other essential expenses. Tr. p. 122. Finally, because of their financial constraints, low-income households are generally more likely to have problems paying their bills. Tr. p. 123. DEC incurs costs

managing relationships with customers who are behind on paying their bills. To the extent that low-income efficiency programs can lower such bill-collection costs for the utility, there are added utility-system benefits from low-income programs that do not accrue to other programs. *Id.*

The Collaborative should consider the design of a new residential, whole-building retrofit program targeted to electrically-heated low-income households, possibly with a tiered-incentive structure. Tr. p. 123. This kind of tiered-incentive could allow income-eligible customers to receive the retrofit services for free. Such a program could be delivered on DEC's behalf by community action agencies (CAAs) that already perform low-income home retrofits using federal and/or state dollars. Tr. p. 124. DEC has experience with this kind of partnership following its investment in the Helping Home Fund.⁸ The Collaborative should analyze the Helping Home Fund to determine whether any aspects of the program could serve as a model for an additional cost-effective EE program offering, taking into consideration the ability of such a program to leverage federal weatherization dollars or other resources. Tr. p. 124.

The Collaborative should review other options as well. Mr. Neme provided the examples of Commonwealth Edison pilot program to promote heat-pump retrofits in electric-resistance-heated, low-income, multi-family buildings in the Chicago area.⁹ Similarly, Entergy Arkansas is running a program that weatherizes manufactured homes, 37 percent of which were occupied by low-income households and another 29 percent

⁸ CN Ex. 2, Helping Home Fund Report.

⁹ Tr. p. 124 (citing Illinois Commerce Commission, Order, Docket No. 17-0312 (Sept. 11, 2017) (<https://www.icc.illinois.gov/docket/files.aspx?no=17-0312&docId=256554>)).

either “likely” to be or “potentially” low-income.¹⁰ Mr. Neme reported impressive cost-effectiveness scores for this program: 8.56-to-1 TRC benefit-to-cost ratio in 2017. Tr. p. 124. These programs could be models for similar future DEC initiatives and should be reviewed by the Collaborative.

3. Improvements to non-residential programs

DEC should build on recent success and progress in promoting efficiency measures for business customers through the midstream channel of its non-residential Smart \$aver rebate program. Tr. pp. 112-13. The Company’s forecasts show that 2019 lighting savings will be reduced to half of what they were last year. DEC should work to increase savings from its successful programs for non-residential customers.

4. Allow net-metering and small customer generators to participate in Power Manager Load Management Program

DEC should reevaluate its decision to exclude net metering customers from its Power Manager load control program. As DEC witness Evans testified, the Company assumes that net-metering and small customer generators already remove their air-conditioning load from the grid during periods of critical peak demand. But that assumption has not been verified in the real world. Tr. p. 56; NC Justice Center et al Evans Cross-Exam Ex. 1 (Tr. p. 132). There is a real possibility that a net-metering customer’s excess self-generation could provide additional value to over-loaded circuits during periods of late-afternoon summer peak demand. Tr. p. 58. If such customers were allowed to participate in the Power Manager program, it would guarantee that at such critical peak periods, more of that customer’s self-generation would be available to help

¹⁰ Tr. p. 124 (citing Energy Arkansas, Arkansas Energy Efficiency Program Portfolio Annual Report, Docket No. 07-085-TF, 2017 Program Year (May 1, 2018) (<http://www.apscservices.info/EEInfo/EEReports/Entergy%202017.pdf>)).

meet needs of the local grid while home air conditioning cycled off. Arbitrarily excluding such customers from participation, without actual analysis, is shutting off an avenue for potentially further reducing system peak in a cost-effective manner.

V. Approve DEC's Portfolio Performance Incentive Avoided Capacity Cost Calculations

Public Staff witnesses Maness and Williams testified that DEC should assign a zero-dollar value to avoided capacity benefits for purposes of calculating the Company's Portfolio Performance Incentive for its DSM/EE programs in 2019 (and for the following four years). Tr. pp. 149-51; 161-62; 212-28. Likewise, Public Staff witness Williamson recommends assigning a zero avoided-capacity value for purposes of calculating cost-effectiveness in 2019 and beyond. Tr. pp. 182-84. The Public Staff's proposed change to the cost-effectiveness test results in rendering the non-residential Smart \$aver Custom/Assessments and EnergyWise for Business programs non-cost-effective when they otherwise are deemed cost-effective under DEC's approach. Tr. p. 244.

The Public Staff's recommendations stem from the its interpretation of updates to paragraph 69 of the Revised Mechanism that were adopted last year in Docket No. E-7, Sub 1130. Tr. p. 139. According to the revised language, the capacity benefits from Duke's new DSM/EE programs should receive the same treatment that was approved by the Commission for new qualifying facilities in the most recent avoided cost docket, No. E-100, Sub 148. If the Public Staff's interpretation is adopted by the Commission, DEC would lose nearly \$9 million in Portfolio Performance Incentive in 2019. Tr. p. 150.

DEC disagrees that the agreed-to changes in the Revised Mechanism should result in a zero-dollar value for avoided capacity benefits for its DSM/EE programs, as set forth in rebuttal testimony of Timothy Duff and Richard Stevie. Tr. pp. 306-24. NC Justice

Center et al also disagree with the Public Staff's position. First, as SACE and other intervenors pointed out in the biennial avoided cost docket, assigning a zero capacity value for qualifying facilities does not accurately reflect their capacity value, regardless of what is in DEC's most-recent integrated resource plan. *Post-Hearing Brief of Southern Alliance for Clean Energy*, Docket No. E-100, Sub 148 (pp. 29-30). By the same token, the real capacity benefits of the Company's DSM/EE investments should be valued for purposes of the PPI and cost-effectiveness evaluations.

DEC's DSM/EE portfolio is part of a long-term, Commission-approved strategy for avoiding otherwise more expensive utility investments to meet the energy and capacity needs of its retail customers. The DSM/EE portfolio is included in the Company's Integrated Resource Plan.¹¹ Without those program investments, DEC would have additional, more expensive capacity needs than it faces in the coming years. Reducing the Portfolio Performance Incentive and undercutting the cost-effectiveness evaluation would significantly diminish the Company's incentives to grow and expand its DSM/EE programs, ultimately costing DEC's customers more than the disputed amount of the Incentive payment. Such a disincentive runs counter to the State's public policy, which favors least-cost resources, such as EE and DSM, and favors energy conservation and efficiency. *See, e.g.*, N.C. Gen. Stat. §§ 62-2(a)(3a); 62-133.9(b). Moreover, it is not appropriate to make this shift based on a disputed interpretation of a recently revised provision in the Revised Mechanism. Instead, this disputed issue should be taken up during the upcoming review of the Cost Recovery and Incentive Mechanism,

¹¹ Duke Energy Carolinas, LLC 2017 Integrated Resource Plan Update and 2017 REPS Compliance Plan, Docket No. E-100, Sub 147 (Sept. 1, 2017).

VI. Make Improvements to the Collaborative

As noted above, NC Justice Center et al recommend a more thorough discussion of a number of topics in DEC's Collaborative meetings. Mr. Neme provided concrete recommendations for ways to improve the Collaborative and help it to function more collaboratively. He has found similar collaboratives in other jurisdictions to be a more effective venue for addressing complex issues than regulatory proceedings. Tr. p. 126. In jurisdictions where well-functioning collaborative processes have become institutionalized, regulators often choose to focus their efforts on higher-level policy issues, such as savings targets and budgets, and direct the collaboratives to work out EM&V, program design, and other operational issues. Tr. p. 126-27. Mr. Neme identified a number of qualities that allow a collaborative to achieve these goals, including:

- **More frequent meetings:** In order to get substantive work done, the collaborative should meet at least 8 to 10 times a year (almost monthly) for larger group discussions, as well as more numerous sub-group working sessions focused on specific topics (for example, examination and analysis of a particular program design or developing a TRM). Tr. pp. 129-30. In rebuttal testimony, DEC witness Evans agreed with Mr. Neme's recommendation that a combined DEC-DEP Collaborative meet more frequently and employ working groups when doing so would be beneficial. Tr. pp. 247-48.
- **Shared agenda-setting:** Including parties in establishing priorities for discussion, including specific meeting agendas. Tr. p. 130.

- **Independent facilitation:** An independent facilitator ensures that all voices are heard, including in the setting of agendas for meetings, and enables participants in the Collaborative to focus on the topic at hand rather than the actual running of meetings. An outside facilitator has been hired to manage the collaborative process in Illinois, Arkansas, and Michigan and has helped to make the work more effective. Tr. p. 130. As another example, for a recently hosted stakeholder meeting on Duke Energy's planned Power/Forward initiative, the Company brought in the Rocky Mountain Institute as an outside facilitator.¹²
- **Institutionalization of working processes:** This includes establishing a schedule for meetings and what those meetings will cover; distributing agendas; and distributing meeting notes, summaries of agreements/ disagreements, and lists of next steps. All of these steps must be taken with enough advance notice for parties to be able to meaningfully prepare and participate in the meetings. Over time, more formal processes should be developed (e.g., annual processes for reviewing and updating and documenting savings assumptions). Tr. pp. 130-31.

VII. Conclusion

In conclusion, NC Justice Center et al recommend the following steps to help the Company to increase its energy savings from DSM/EE programs and to work more effectively with stakeholders through the Collaborative:

- 1) Order DEC and the Collaborative to analyze and recommend changes before next year's DSM/EE rider application on the filing:
 - a. Development and Adoption of a Technical Resources Manual;

¹² Duke Energy Progress, LLC and Duke Energy Carolinas, LLC's Report of NC Power/Forward Technical Workshop N.C.U.C. Docket Nos. E-2, Sub 1142 and E-7, Sub 1146 (Jun. 26, 2018) (noting that the workshop was independently facilitated by the Rocky Mountain Institute).

b. Rebalance the EE portfolio to acquire more savings from longer-lasting measures and to rely less on behavioral programs;

c. Revise DEC's assumptions regarding the persistence of savings from the MyHER program and adopt revisions to program delivery that are consistent with those new assumptions;

d. Analyze and make adjustments to DEC's economic net-benefit calculations for lighting measures from 2020 forward that are subject to new federal efficiency standards pursuant to the Energy Independence and Security Act;

e. Analyze and make program recommendations for new and improved measures that would provide direct bill-benefits to low-income customers and renters, including consideration of program offerings by Entergy Arkansas and Commonwealth Edison as well as the Helping Home Fund.

2) Accept the avoided capacity value used by DEC for its DSM/EE programs in year 2019 for purposes of the Portfolio Performance Incentive and cost-effectiveness evaluations and reject the Public Staff's recommended avoided capacity value of zero;

3) Order DEC to continue its residential Smart \$aver efficiency program and to work with the Collaborative to consider recommendations provided in the testimony of Chris Neme to improve the cost-effectiveness of the program;

4) Order DEC and the Collaborative to analyze and reconsider before its next annual DSM/EE rider application the policy of excluding net-metering and small customer generator customers from participating the Power Manager load control program;

5) Adopt the recommendations for improving the Collaborative set forth by NC Justice Center et al witness Chris Neme, including the use of more frequent meetings, working groups, an outside facilitator, and shared agenda-setting.

Respectfully submitted this 20th day of July, 2018.

/s/ David L. Neal

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CERTIFICATE OF SERVICE

I certify that the persons on the service list have been served with the foregoing Post-Hearing Brief of North Carolina Justice Center, Natural Resources Defense Council, and Southern Alliance for Clean Energy either by electronic mail or by deposit in the U.S. Mail, postage prepaid.

This the 20 day of July, 2018.

s/ Mindy Drane