Troutman Sanders LLP
301 S. College Street, Suite 3400
Charlotte, NC 28202

troutman.com

Molly McIntosh Jagannathan
D 704.998.4074
F 704.998.4051
molly.jagannathan@troutmansanders.com

October 18, 2018

VIA ELECTRONIC FILING

M. Lynn Jarvis
Chief Clerk
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, North Carolina 27699-4300

**Re: Application of Duke Energy Progress, LLC for Approval of Demand-Side Management and Energy Efficiency Cost Recovery Rider Pursuant to N.C. Gen. Stat. § 62-133.9 and NCUC Rule R8-69 – Proposed Order
Docket No. E-2, Sub 1174**

Dear Ms. Jarvis:

I enclose Duke Energy Progress, LLC's Proposed Order for filing in connection with the referenced matter. An electronic copy is also being emailed to briefs@ncuc.net.

Thank you for your attention to this matter. If you have any questions, please let me know.

Sincerely,

Electronically submitted
s/ Molly McIntosh Jagannathan
molly.jagannathan@troutmansanders.com

Enclosure

Copy: Parties of Record

STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. E-2, SUB 1174

In the Matter of

Application of Duke Energy Progress, LLC for Approval of Demand-Side Management and Energy Efficiency Cost Recovery Rider Pursuant to N.C. Gen. Stat. § 62-133.9 and Commission Rule R8-69	)))))	PROPOSED ORDER APPROVING DSM/EE RIDER AND REQUIRING FILING OF PROPOSED CUSTOMER NOTICE

HEARD: Tuesday, September 18, 2018 in Commission Hearing Room 2115, Dobbs Building, 430 North Salisbury Street, Raleigh, North Carolina

BEFORE: Commissioner ToNola D. Brown-Bland, Presiding; Chairman Edward S. Finley, Jr.; and Commissioners Jerry C. Dockham, James G. Patterson, Lyons Gray, Daniel G. Clodfelter, and Charlotte A. Mitchell

APPEARANCES:

For Duke Energy Progress, LLC:

Kendrick Fentress, Associate General Counsel
Duke Energy Corporation
401 South Wilmington Street, Raleigh, North Carolina 27602

For the Carolina Utility Customers Association, Inc.:

Robert F. Page
Crisp & Page, PLLC
4010 Barrett Drive, Suite 205, Raleigh, North Carolina 27609

For the Carolina Industrial Group for Fair Utility Rates II:

Warren K. Hicks
Bailey & Dixon, LLP
434 Fayetteville Street, Suite 2500, Raleigh, North Carolina 27602

For the North Carolina Sustainable Energy Association:

Benjamin Smith, Regulatory Counsel
4800 Six Forks Road, Suite 300, Raleigh, North Carolina 27609

For the North Carolina Justice Center, Southern Alliance for Clean Energy, Natural Resource Defense Council, and North Carolina Housing Coalition:

David Neal, Senior Attorney
Southern Environmental Law Center
601 West Rosemary Street, Suite 220, Chapel Hill, North Carolina 27516

For the Using and Consuming Public:

Lucy E. Edmondson
Heather D. Fennell
Public Staff – North Carolina Utilities Commission
4326 Mail Service Center, Raleigh, North Carolina 27699

BY THE COMMISSION: N.C. Gen. Stat. § 62-133.9(d) authorizes the North Carolina Utilities Commission ("Commission") to approve an annual rider to the rates of electric public utilities to recover all reasonable and prudent costs incurred for the adoption and implementation of new demand-side management ("DSM") and energy efficiency ("EE") programs. The Commission is also authorized to award incentives to electric utilities for adopting and implementing new DSM/EE programs, including rewards based on the sharing of savings achieved by the programs. Commission Rule R8-69(b) provides that the Commission will each year conduct a proceeding for each electric utility to establish an annual DSM/EE rider to recover the reasonable and prudent costs incurred for adopting and implementing new DSM/EE measures previously approved by the Commission pursuant to Commission Rule R8-68. Under Commission Rule R8-69, such rider consists of the utility's forecasted costs during the rate period, similarly forecasted performance incentives (including net lost revenues ("NLR")) as allowed by the Commission, and an experience modification factor ("EMF") rider to collect the difference between the utility's actual reasonable and prudent costs and incentives incurred and earned during the test period and the actual revenues realized during the test period under the DSM/EE rider (based on previous forecasts) then in effect.

<u>Docket No. E-2, Sub 1174</u>

On June 20, 2018, Duke Energy Progress, LLC ("DEP" or the "Company"), filed an application for approval of its annual DSM/EE cost recovery rider ("Application") pursuant to N.C. Gen. Stat. § 62-133.9 and Commission Rule R8-69. Along with the Application, DEP filed the associated testimony and exhibits of Carolyn T. Miller and Robert P. Evans in support of recovery of DSM/EE costs and utility incentives forecasted for the rate period of January 1, 2019 through December 31, 2019, including program expenses, amortizations and carrying costs associated with deferred prior period costs, Distribution System Demand Response ("DSDR") depreciation and capital costs, NLR, and program and portfolio performance incentives ("PPI"). In addition, DEP asked for approval of an EMF component of its DSM/EE rider to true-up its actual DSM/EE costs and utility incentives during the test period of January 1, 2017 through December 31, 2017.

On July 2, 2018, the Commission issued an order scheduling a public hearing in this matter for September 18, 2018, establishing discovery guidelines, providing for intervention and testimony by other parties, and requiring public notice. On September 13, 2018, DEP filed its affidavits of publication indicating that the Company had provided notice in newspapers of general circulation as required by the Commission's July 2, 2018 order.

The intervention of the Public Staff is recognized pursuant to N.C. Gen. Stat. § 62-15(d) and Commission Rule R1-19(e). On June 28, 2018, the North Carolina Sustainable Energy Association ("NCSEA") filed a petition to intervene, which was granted by Commission order on June 29, 2018. On July 3, 2018, the Carolina Industrial Group for Fair Utility Rates II ("CIGFUR II") filed a petition to intervene, which was granted by Commission order on July 6, 2018. On July 19, 2018, the Carolina Utility Customers Association, Inc. ("CUCA") filed a petition to intervene, which was granted by Commission order on July 24, 2018. On August 2, 2018, the North Carolina Justice Center, Southern Alliance for Clean Energy ("SACE"), Natural Resources Defense Council ("NRDC"), and North Carolina Housing Coalition (collectively, "NC Justice Center, et al.") filed a petition to intervene, which was granted by Commission order on August 14, 2018.

On September 4, 2018, NC Justice Center, et al. filed the testimony and exhibits of Christopher Neme. Also on September 4, 2018, the Public Staff filed the testimony and exhibits of Michael C. Maness, David M. Williamson, and John R. Hinton.

On September 10, 2018, DEP filed the supplemental testimony and exhibits of witness Miller and the supplemental exhibits of witness Evans ("Supplemental Filing").

Also on September 10, 2018, the Company filed a Motion for Additional Public Hearing and Public Notice of Revised Proposed Rates. On September 11, 2018, the Commission issued an order scheduling an additional public hearing in this matter for October 8, 2018 and requiring public notice. On October 5, 2018, DEP filed its affidavits of publication indicating that the Company had provided notice in newspapers of general circulation as required by the Commission's September 11, 2018 order. On October 16, 2018, the Company filed additional affidavits of publication that it had been unable to obtain earlier due to Hurricane Florence.

On September 12, 2018, DEP filed the rebuttal testimony and exhibit of Timothy J. Duff and the rebuttal testimony of witness Evans.

On September 12, 2018, NC Justice Center, et al. filed a motion to excuse witness Neme from appearing at the September 18, 2018 hearing. On September 13, 2018, the Public Staff and DEP filed a motion to excuse their witnesses. On September 13, 2018, the Commission issued an order granting both motions.

On September 17, 2018, the Public Staff filed the supplemental testimony and exhibit of witness Maness.

On September 18, 2018, the hearing was held as scheduled. No public witnesses appeared at the hearing.

On October 8, 2018, the additional public hearing was held as scheduled. No public witnesses appeared at the hearing.

The parties were to submit briefs and/or proposed orders no later than October 18, 2018.

<u>Cost Recovery Mechanism</u>

On June 15, 2009, in Docket No. E-2, Sub 931, the Commission issued an *Order Approving Agreement and Stipulation of Partial Settlement, Subject to Certain Commission-Required Modifications* in DEP's first DSM/EE rider proceeding ("Sub 931 Order"). In the Sub 931 Order, the Commission approved, with certain modifications, an Agreement and Stipulation of Partial Settlement ("Stipulation") between DEP, the Public Staff, and Wal-Mart Stores East, LP, and Sam's East, Inc., setting forth the terms and conditions for approval of DSM/EE measures and the annual DSM/EE rider proceedings pursuant to N.C. Gen. Stat. § 62-133.9 and Commission Rules R8-68 and R8-69. The Stipulation included a Cost Recovery and Incentive Mechanism for DSM and EE Programs ("Original Mechanism"), which was modified by the Commission in its Sub 931 Order and subsequently in its *Order Granting Motions for Reconsideration in Part* issued on November 25, 2009, in the same docket. The Original Mechanism as approved after reconsideration allows DEP to recover all reasonable and prudent costs incurred and utility incentives earned for adopting and implementing new DSM and EE measures in accordance with N.C. Gen. Stat. § 62-133.9, Commission Rules R8-68 and R8-69, and the additional principles set forth in the Original Mechanism.

On January 20, 2015, in Docket No. E-2, Sub 931, the Commission issued an *Order Approving Revised Cost Recovery and Incentive Mechanism and Granting Waivers*. In that Order, the Commission approved an agreement between DEP, the Public Staff, NRDC, and SACE proposing revisions to the Original Mechanism, generally to be effective January 1, 2016 ("Revised Mechanism"). The Revised Mechanism allows DEP to recover all reasonable and prudent costs incurred and utility incentives earned for adopting and implementing new DSM and EE measures in accordance with N.C. Gen. Stat. § 62-133.9, Commission Rules R8-68 and R8-69, and the additional principles set forth in the Revised Mechanism.

On November 27, 2017, in Docket No. E-2, Sub 1145 ("Sub 1145"), the Commission issued its *Order Approving DSM/EE Rider and Requiring Filing of Proposed Customer Notice* ("Sub 1145 Order"), in which it approved the agreement to revise certain provisions of the Revised Mechanism reached by the Company and the

Public Staff. The Revised Mechanism, as revised by the Sub 1145 Order, is set forth in Maness Exhibit I and referred to herein as the "Mechanism."

In the present proceeding, based upon DEP's verified Application, testimony, and exhibits received into evidence, and the record as a whole, the Commission makes the following:

FINDINGS OF FACT

1. DEP is a duly organized limited liability company existing under the laws of the State of North Carolina, is engaged in the business of developing, generating, transmitting, distributing, and selling electric power to the public in North and South Carolina, and is subject to the jurisdiction of the Commission as a public utility. DEP is lawfully before this Commission based upon its application filed pursuant to N.C. Gen. Stat. § 62-133.9 and Commission Rule R8-69.

2. The test period for purposes of this proceeding extends from January 1, 2017 through December 31, 2017.

3. The rate period for purposes of this proceeding extends from January 1, 2019 through December 31, 2019.

4. DEP has requested approval for the recovery of costs, and utility incentives where applicable, related to the following DSM/EE programs:

Residential

- Appliance Recycling
- EE Education Program
- Multi-Family EE
- My Home Energy Report ("MyHER")
- Neighborhood Energy Saver (Low-Income)
- Smart $aver EE Program (formerly, Home Energy Improvement Program)
- New Construction
- EnergyWise (Load Control)
- Save Energy and Water Kit

- Energy Assessment

Non-Residential
- Smart $aver Energy Efficient Products and Assessments (formerly, EE for Business)
- Smart $aver Performance Incentive Program
- Small Business Energy Saver
- Commercial, Industrial, and Governmental ("CIG") Demand Response Automation
- EnergyWise for Business

Residential and Non-Residential
- DSDR
- EE Lighting

These programs are eligible for cost and utility incentive recovery, where applicable.

5. For purposes of inclusion in this DSM/EE rider, the Company's portfolio of DSM and EE programs is cost-effective.

6. The Non-Residential Smart $aver, EnergyWise for Business, and Residential New Construction programs are cost-effective under DEP's calculation of avoided capacity costs. Since the Commission agrees with the Company's determination of avoided capacity costs for the reasons set forth in the Evidence and Conclusions for Finding of Fact No. 14, the Commission finds and concludes that these programs are cost-effective, and no further action is required by the Company.

7. The Residential Smart $aver EE Program should not be suspended at this time. The Company should propose modifications to this program no later than December 31, 2018, with the goal of restoring the TRC score to 1.00 or greater. The Company should include a discussion of the impact of these modifications and other actions it has taken to improve cost-effectiveness in next year's DSM/EE rider proceeding.

8. Given the proximity of the applicable cost-effectiveness test to 1.00, the Commission finds and concludes that the MyHER Program does not require additional scrutiny at this time. If the program does not project cost-effectiveness for Vintage 2020, pursuant to Paragraph 22B of the Mechanism, in its next DSM/EE rider filing, the Company should provide a discussion of the actions being taken to maintain or improve cost-effectiveness, or alternatively, its plans to terminate the program.

9. Due to both the short amount of time it has been in place and the anticipated increase in cost-effectiveness, the Commission finds and concludes that the Non-Residential Smart $aver Performance Incentive Program does not require additional scrutiny at this time. If the program does not project cost-effectiveness for Vintage 2020, pursuant to Paragraph 22B of the Mechanism, in its next DSM/EE rider filing, the Company should provide a discussion of the actions being taken to maintain or improve cost-effectiveness, or alternatively, its plans to terminate the program.

10. The evaluation, measurement, and verification ("EM&V") reports filed as Evans Exhibits A, B, C, D, E, F, G, H, and K are acceptable for purposes of this proceeding and should be considered complete for purposes of calculating program impacts. DEP has appropriately incorporated the results of these EM&V reports into the DSM/EE rider calculations.

11. The results of the EM&V report for the MyHER Program (Evans Exhibit I) are accepted conditionally for purposes of this proceeding. The Public Staff may continue to review this report and offer further recommendations for the Company's consideration in the next DSM/EE rider proceeding.

12. Public Staff witness Williamson's recommendation that the program evaluator for the Company's EE Lighting Program should (a) include the basis for the selected weighting methodology (weightings based on bulb sales, measure savings, or other metric) when assessing program savings, and (b) indicate what other weighting methodologies were considered and why they were rejected, and why the selected methodology is preferable, is appropriate for inclusion in future EM&V reports for the EE Lighting Program.

13. The Company has complied with the Commission's requirement that DEP monitor the changes in annual ratios of allocations between non-DSDR and DSDR equipment and report the degree of change in its annual DSM/EE rider filing. No change in the allocation ratio applicable to capacitors was necessary for 2018. The allocation ratio applied to regulators was elevated from 77.79 percent to 79.45 percent for 2018. Annual review of the allocation ratios should continue, should be reported to the Public Staff each year, and any changes should be addressed in future rider proceedings.

14. It is inappropriate to calculate the avoided capacity cost benefits for purposes of the PPI and cost-effectiveness of the Company's DSM/EE programs under the assumption that capacity avoided prior to year 2022 be assigned a zero dollar value. The Public Staff's recommendation of such, and the corresponding reduction to the Company's Vintage 2019 PPI, is rejected.

15. In its direct testimony and exhibits, DEP requested the recovery of NLR in the amount of $40,178,116 and PPI in the amount of $21,846,452 through the EMF component of the total DSM/EE rider, and NLR of $32,348,840 and PPI of $25,997,556 for recovery in the forward-looking, or prospective component of the total rider. As a

result of additional analysis performed by DEP and discussions with the Public Staff during the course of the proceeding, in its Supplemental Filing, the Company corrected its EMF NLR amount to $40,144,647 and the EMF PPI amount to $21,798,731. The Company also corrected its prospective NLR amount to $31,947,155, as reflected in its Supplemental Filing. DEP's proposed recovery of NLR and PPI, as adjusted by the Supplemental Filing, is consistent with the Mechanism and is appropriate, subject to further review to the extent allowed in the Mechanism.

16. For purposes of the DSM/EE rider to be set in this proceeding and subject to review in DEP's future DSM/EE rider proceedings, the reasonable and appropriate estimate of the Company's North Carolina retail DSM/EE program rate period amounts, consisting of its amortized operations and maintenance ("O&M") costs, depreciation, capital costs, taxes, amortized incremental administrative and general ("A&G") costs, carrying charges, NLR, and PPI, is $175,770,263, and this is the appropriate amount to use to develop the forward-looking DSM/EE revenue requirement. This amount is the total of the $176,171,948 proposed in DEP's initial filing and the total adjustment of $(401,685) reflected in DEP's Supplemental Filing.

17. For purposes of the EMF component of its DSM/EE rider, DEP's reasonable and prudent North Carolina retail test period costs and incentives, consisting of its amortized O&M costs, capital costs, taxes, amortized incremental A&G costs, carrying charges, NLR, and PPI, are $168,007,613. This amount is the total of the $168,088,803 proposed in DEP's initial filing and the total EMF adjustment of $(81,190) reflected in DEP's Supplemental Filing. The reasonable and appropriate amount of test period DSM/EE rider revenues and miscellaneous adjustments to take into consideration

in determining the test period DSM/EE under- or over-recovery is $157,320,600. Therefore, the test period revenue requirement, minus the test period revenues collected and miscellaneous adjustments, leaves $10,687,013 as the test period under-collection that is appropriate to use as the DSM/EE EMF revenue requirement in this proceeding.

18. After assignment or allocation to customer classes in accordance with N.C. Gen. Stat. § 62-133.9, Commission Rule R8-69, and the Commission orders in Docket No. E-2, Sub 931, the revenue requirements for each rate class, excluding the North Carolina Regulatory Fee ("NCRF"), are as follows:

DSM/EE PROSPECTIVE COMPONENT:

Residential	$100,657,479
General Service EE	68,669,252
General Service DSM	6,086,071
Lighting	357,461
Total	$175,770,263

DSM/EE EMF:

Residential	$ 494,880
General Service EE	11,979,271
General Service DSM	(1,790,030)
Lighting	2,892
Total	$10,687,013

19. The appropriate and reasonable North Carolina retail class level kilowatt-hour ("kWh") sales for use in determining the DSM/EE and DSM/EE EMF billing factors in this proceeding are:

Rate Class	kWh Sales
Residential	15,740,238,953
General Service EE	9,852,771,378
General Service DSM	9,737,467,991
Lighting	361,265,217

20. The appropriate DSM/EE EMF billing factors, excluding NCRF, are: 0.003 cents per kWh for the Residential class; 0.122 cents per kWh for the EE component of the General Service classes; (0.018) cents per kWh for the DSM component of the General Service classes, and 0.001 cents per kWh for the Lighting class. These DSM/EE EMF billing factors do not change when the NCRF is included.

21. The appropriate forward-looking DSM/EE rates to be charged by DEP during the rate period, excluding NCRF, are: 0.640 cents per kWh for the Residential class; 0.697 cents per kWh for the EE component of the General Service classes; 0.063 cents per kWh for the DSM component of the General Service classes; and 0.099 cents per kWh for the Lighting class. The appropriate forward-looking DSM/EE rates to be charged by DEP during the rate period, including NCRF, are: 0.641 cents per kWh for the Residential class; 0.698 cents per kWh for the EE component of the General Service classes; 0.063 cents per kWh for the DSM component of the General Service classes; and 0.099 cents per kWh for the Lighting class.

22. DEP should leverage its collaborative stakeholder meetings ("Collaborative") to discuss the EM&V issues and program design issues raised in the testimony of NC Justice Center, et al. witness Neme and report the results of those discussions in the Company's 2019 DSM/EE rider filing.

23. Beginning in 2019, the Company should increase the frequency of the Collaborative meetings so that the combined DEP/Duke Energy Carolinas, LLC ("DEC") Collaborative meets every two months.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 1

This finding of fact, which is supported by DEP's Application, is essentially informational, procedural, and jurisdictional in nature and is uncontroverted.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 2-3

No party opposed DEP's proposed rate period and test period. The rate period and test period proposed by DEP are consistent with the Mechanism approved by the Commission. The proposed rate period and test period are reasonable.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 4

The evidence for this finding of fact can be found in DEP's application, the testimony and exhibits of DEP witnesses Miller and Evans, the testimony of Public Staff witness Williamson, and various Commission orders in program approval dockets.

DEP witness Miller's testimony shows the portfolio of DSM/EE programs that is associated with the Company's request for approval of this rider. (Tr. at 18.) The direct testimony of DEP witness Evans lists the DSM/EE programs for which the Company is requesting cost recovery, and incentives where applicable, in this proceeding. (*Id*. at 60-61.) Those programs are:

Residential

- Appliance Recycling
- EE Education Program
- Multi-Family EE
- MyHER
- Neighborhood Energy Saver (Low-Income)
- Smart $aver EE Program (formerly, Home Energy Improvement Program)
- New Construction
- EnergyWise (Load Control)
- Save Energy and Water Kit
- Energy Assessment

Non-Residential

- Smart $aver Energy Efficient Products and Assessments (formerly, EE for Business)
- Smart $aver Performance Incentive Program
- Small Business Energy Saver
- CIG Demand Response Automation
- EnergyWise for Business

Residential and Non-Residential

- DSDR
- EE Lighting

(*Id*.)

In his testimony, Public Staff witness Williamson also listed the DSM/EE programs for which the Company seeks cost recovery and noted that each of these programs has received approval as a new DSM or EE program and is eligible for cost recovery in this proceeding under N.C. Gen. Stat. § 62-133.9. (*Id*. at 232-233.)

Thus, the Commission finds and concludes that each of the programs listed by witnesses Evans and Williamson has received Commission approval as a new DSM or EE program and is, therefore, eligible for cost recovery in this proceeding under N.C. Gen. Stat. § 62-133.9.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 5-9

The evidence for these findings can be found in the testimony and exhibits of Company witness Evans, Public Staff witness Williamson, and NC Justice Center, et al. witness Neme.

DEP witness Evans testified that the Company reviewed the portfolio of DSM/EE programs and performed prospective analyses of each of its programs and the aggregate portfolio for the Vintage 2019 period, the results of which are incorporated in Evans

Exhibit No. 7. (Tr. at 62.) He noted that the Company's aggregate portfolio continues to project cost-effectiveness. (*Id.*) However, DEP's calculations indicate that that the following programs do not pass the Total Resource Cost test ("TRC") threshold of 1.00: Residential Smart $aver (TRC of 0.57); My Home Energy Report (TRC of 0.96); and Non-Residential Smart $aver Performance Incentive (TRC of 0.92). (*See* Evans Ex. 7.)

Public Staff witness Williamson stated in his testimony that he reviewed DEP's calculations of cost-effectiveness under each of the four standard cost-effectiveness tests – the Utility Cost Test ("UCT"), TRC, Participant, and Ratepayer Impact Measure ("RIM") tests. (Tr. at 242.) The Public Staff also compared the cost-effectiveness test results in previous DSM/EE proceedings to the current filing and developed a trend of cost-effectiveness that serves as the basis for the Public Staff's recommendation of whether a program should be terminated. (*Id.* at 244.) Witness Williamson testified that while many programs continue to be cost-effective, the TRC scores as filed by the Company for all programs have decreased since the 2017 DSM/EE rider proceeding, mainly due to changes in avoided costs, but also due to updated EM&V and program participation. (*Id.*)

As discussed in more detail later in this order, witness Williamson explained that the Public Staff does not agree with the avoided capacity rates used by the Company in its calculations of cost-effectiveness filed in this proceeding. (*Id.* at 247.) Under the Public Staff's interpretation, the avoided capacity rates would reflect zero avoided capacity values in years prior to the identified need for new capacity in the underlying IRP that serves as the basis for the avoided capacity rate calculations. (*Id.* at 247-248.)

As noted above, under DEP's calculations of cost-effectiveness, the Residential

Smart $aver EE Program, MyHER Program, and Non-Residential Smart $aver Performance Incentive Program are not projected to be cost-effective for Vintage 2019 under the TRC test. (*See* Evans Exhibit 7.) Under the Public Staff's methodology (i.e., applying zero capacity value for years prior to 2022), the Residential New Construction, EE for Business, and EnergyWise for Business programs would also not be cost-effective under the TRC test for Vintage 2019. (Tr. at 251.)

Witness Williamson explained that under Paragraph 22 and Paragraphs 22A-D of the Mechanism, for any program that initially demonstrates a TRC score less than 1.00, the Company will include in its annual DSM/EE rider filing a discussion of the actions being taken to maintain or improve cost-effectiveness, or alternatively, its plans to terminate the program. (*Id*. at 251-252.) If a program demonstrates a prospective TRC score of less than 1.00 in a second DSM/EE rider proceeding, the Company will include a discussion of what actions it has taken to improve cost-effectiveness. (*Id*. at 252.) If a program demonstrates a prospective TRC score of less than 1.00 in a third DSM/EE rider proceeding, the Company will terminate the program at the end of the year following the DSM/EE rider order, unless otherwise ordered by the Commission. (*Id*.)

NC Justice Center, et al. witness Neme testified that DEP's DSM/EE portfolio is very cost-effective, demonstrating that DSM/EE programs are a least cost resource for meeting consumers' electricity needs. (*Id*. at 118, 151.) Based on DEP's estimated UCT benefit-cost ratio, he stated that for every dollar that DEP spends on its programs, it is eliminating the need to spend $2.63 on new power plants, the fuel to run those power plants, new power lines, and other investments otherwise needed to supply electricity to homes and businesses. (*Id*.) DEP's analysis also suggests that the programs are very cost-effective under the TRC test, with a benefit cost-ratio of approximately 2.1 to 1. (*Id*. at 151.)

As a whole, the Commission concludes that DEP's portfolio of DSM and EE programs is cost-effective and eligible for inclusion in the Company's DSM/EE rider. The Commission makes specific findings and conclusions as to the individual programs that DEP and/or the Public Staff have identified as not being cost-effective below.

<u>Residential New Construction, EE for Business, and EnergyWise for Business</u>

Witness Williamson testified that DEP's EnergyWise for Business Program is a DSM program that draws the majority of its avoided cost benefits from capacity and transmission and distribution ("T&D") reductions. (*Id*. at 253.) He acknowledged that using the Company's application of avoided capacity costs, this program is cost-effective under the TRC test. (*Id*.) However, when using the Public Staff's methodology, this program is no longer cost-effective. (*Id*.) Thus, according to witness Williamson, pursuant to Paragraph 22B of the Mechanism, the Company should provide a discussion of the actions being taken to maintain or improve cost-effectiveness, or alternatively, its plans to terminate the program. (*Id*.) He recommended further that pursuant to Paragraph 22C of the Mechanism, if this program shows a prospective TRC of less than 1.00 in next year's DSM/EE rider proceeding, the Company should include a discussion of what actions it has taken to improve cost-effectiveness. (*Id*.)

Like EnergyWise for Business, the Residential New Construction and EE for Business programs are cost-effective under the TRC test using the Company's application of avoided capacity costs, but drop below 1.00 after incorporating zeros for the value of calculating avoided costs pursuant to the Public Staff's methodology. (*See id*. at 251.) As a result, witness Williamson recommended that, pursuant to Paragraph 22B of the Mechanism, the Company should provide a discussion of the actions being taken to maintain or improve cost-effectiveness, or alternatively, its plans to terminate the program. (*Id*. at 252-253.)

In his rebuttal testimony, witness Evans indicated that the Company does not agree with the application of zero avoided capacity cost values proposed by the Public Staff for the determination of program cost-effectiveness. (*Id*. at 82.) He reiterated that while use of the Public Staff's proposed zero avoided capacity cost values would render the EnergyWise for Business, EE for Business, and Residential New Construction programs non-cost-effective, these programs are considered to be cost-effective under the avoided cost rates applied by the Company. (*Id*.) He concluded that because these programs are cost-effective under the TRC test using the Company's methodology, Paragraph 22B of the Mechanism does not apply. (*Id*.) He added that it is important to recognize that these programs constitute a significant portion of the Company's DSM/EE portfolio, which demonstrates the impact that the Public Staff's position on avoided costs could have on the Company's portfolio. (*Id*.)

The EnergyWise for Business, EE for Business, and Residential New Construction Program programs are cost-effective under the TRC test using DEP's calculation of avoided capacity costs. Since the Commission agrees with the Company's determination of avoided capacity costs for the reasons set forth in the Evidence and Conclusions for Finding of Fact No. 14, it finds and concludes that these programs are cost-effective, and no further action is required by the Company.

MyHER Program

Witness Williamson recommended that the Company be required to provide a discussion in the next proceeding on the actions being taken to maintain or improve cost-effectiveness of the MyHER program, or alternatively, its plans to terminate this program, under Paragraph 22B of the Mechanism. (*Id*. at 252-253.)

Witness Evans testified that the Company's EM&V for the MyHER Program indicates a TRC result of 0.96, which for practical purposes, is essentially 1.00. (*Id*. at 82.) He noted that there has only been a single EM&V study performed on the MyHER Program and that this single program constitutes a significant portion of the Company's portfolio. (*Id*.) In any event, the Company believes that the program's projected marginally negative cost-effectiveness is merely a short-term issue that will resolve itself over time. (*Id*. at 62-63.) He explained that the program is still relatively young (launched in March 2015) and was evaluated shortly after its launch (evaluation period of January 2016 through December 2016). (*Id*. at 63.) The Company believes that the first evaluation may not provide a complete picture of the savings that can be realized from participants over time. (*Id*.) Based on the MyHER results the Company has experienced in other jurisdictions where the program has been in the market longer (including DEC), the Company believes that the savings realized by participants will increase as customer engagement becomes more established. (*Id*.) In addition, witness Evans stated that the Company continues to work with the program vendor to identify potential cost savings for the program. (*Id*.) Given the closeness of the applicable cost-effectiveness test to 1.00 and the importance of the program, he testified that he would not recommend that

MyHER fall under the provisions of Paragraph 22B of the Mechanism at this time. (*Id*. at 82-83.)

The Commission is persuaded that MyHER does not require additional scrutiny at this time, due to proximity of the 0.96 TRC score to the 1.00 threshold and the anticipated improvement in cost-effectiveness results. Nevertheless, if the program does not project cost-effectiveness for Vintage 2020, pursuant to Paragraph 22B of the Mechanism, the Company shall provide a discussion in its next DSM/EE rider filing of the actions being taken to maintain or improve cost-effectiveness, or alternatively, its plans to terminate the program.

Non-Residential Smart $aver Performance Incentive Program

The forecasted 2019 TRC score for the Non-Residential Smart $aver Performance Incentive Program is 0.92, and the UCT score is 3.75. (*Id*. at 52.) Witness Evans pointed out that these scores are significantly greater than the 0.40 TRC and 0.54 UCT scores submitted in the Company's 2017 cost recovery request. (*Id*.) He noted that while the 0.92 TRC score may be viewed as slightly less than optimal in isolation, this program encompasses energy saving measures related to new technologies, unknown building conditions and system constraints, as well as uncertain operating circumstances, occupancy, or production schedules. (*Id*. at 52-53.) As such, energy savings are difficult to project with any level of accuracy. (*Id*. at 53.) Due to the scope of projects envisioned, the Company also believes that the program could impact a customer's decision to opt into the EE portion of the rider; in other words, if this program were no longer offered as part of the Company's EE portfolio, additional customers may elect to opt out as a result. (*Id*.) Witness Evans testified that the program also limits the prospects of overcompensating participants at the expense of other customers, or undercompensating participants for their EE improvements. (*Id*.) The Company believes that this program is an important element of its non-residential portfolio of programs and that its cost-effectiveness results will continue to improve as more customers become familiar with it and participation increases. (*Id*.)

Witness Williamson testified that the Non-Residential Smart $aver Performance Incentive Program was launched in January 2017. (*Id*. at 252.) He indicated that though this is the second year that the program has not been cost-effective, the Public Staff prefers to give new programs a year to get established before directing the Company to take action to improve cost-effectiveness. (*Id*.) He then recommended that the Company be required to provide a discussion in the next proceeding on the actions being taken to maintain or improve cost-effectiveness of the Non-Residential Smart $aver Performance Incentive Program, or alternatively, its plans to terminate this program, under Paragraph 22B of the Mechanism. (*Id* at. 252-253.)

In his rebuttal testimony, witness Evans reiterated that the program was intended to encompass large EE-related projects with uncertainty relative to their performance (e.g., projects that employ new technologies). (*Id*. at 83.) He explained that related program incentives are provided in installments based on actual savings. (*Id*.) As a result, participants are properly incentivized for their EE-related investments, and other customers are shielded from the impacts of overstated performance. (*Id*.) He also indicated that very few projects are appropriate for participation in the program. (*Id*.) The 0.92 TRC test score reflected in Evans Exhibit 7 was based upon participation forecasts and costs used in the Company's 2016 program filing. (*Id*.) During 2017, only five projects were involved. (*Id*.) Currently, there are seventy-four projects underway in the DEP service territory. (*Id*.) Witness Evans testified that the Company's estimated TRC score for this program, based on these and other projects under review, should exceed 1.50. (*Id*.) Therefore, the Company does not believe that this program requires additional scrutiny at this time, due to both the short time it has been in place and its anticipated cost-effectiveness results. (*Id*.)

The Commission agrees that this program does not require additional scrutiny at this time, due to both the short time it has been in place and the anticipated improvement in cost-effectiveness results. Nevertheless, if the program does not project cost-effectiveness for Vintage 2020, pursuant to Paragraph 22B of the Mechanism, the Company shall provide a discussion in its next DSM/EE rider filing of the actions being taken to maintain or improve cost-effectiveness, or alternatively, its plans to terminate the program.

Residential Smart $aver EE Program

The Company's Residential Home Energy Improvement Program ("HEIP") was originally approved as a new EE program on April 30, 2009 in Docket No. E-2, Sub 936. It initially included EE measures associated with duct testing and repair, window replacement, attic insulation and air sealing, tune-up of existing HVAC (heating, ventilation, and air conditioning) systems, an HVAC maintenance package that includes refrigerant and air flow adjustments, and replacement of existing central air conditioning and heat pump HVAC systems with more efficient units.

On November 1, 2011, DEP filed an application in the same docket seeking approval of the following modifications: (1) removal of the window replacement and duct testing measures, as well as one of the HVAC tune-up measures; (2) an increase in the monetary incentives for the attic insulation and air sealing measures; (3) addition of two new measures for high efficiency room air conditioning units and heat pump water heaters; and (4) clarification of the assignment of environmental attributes resulting from EE savings realized from the program. On January 31, 2012, the Commission approved the requested modifications.

On October 2, 2015, in the same docket, DEP filed an application seeking approval of modifications to HEIP, including changes to the incentive structure and addition of a referral channel to guide interested customers to one or more DEP-approved HVAC contractors who have paid DEP a fee to be on the referral list. In its comments, the Public Staff raised the concern that the program as a whole, and some of the individual measures, were not projecting cost-effectiveness under the TRC test. The Company responded that the cost-effectiveness results are due to elevated participant costs due to the high upfront cost of efficient HVAC equipment; DEP predicted that, as the cost of HVAC equipment declined, the TRC result would improve. The Public Staff and DEP reached an agreement that the Public Staff would support approval of the modifications, as amended by the Public Staff, with the exception that if the program does not have a projected TRC greater than 1.00 by March 1, 2017, then the program will terminate effective March 31, 2017. The Company also agreed that if the projected TRC is lower than 1.00 as of March 1, 2017, or if the actual TRC for 2016 and the early part of 2017 is below 1.00, DEP would refund any Vintage 2016 and 2017 incentives associated with the program (i.e., PPI or NLR) that DEP had collected in rates. The Commission approved the agreed-to program modifications with these conditions on February 9, 2016.

On March 1, 2017, DEP made a filing in Docket No. E-2, Sub 936 indicating a projected TRC score of 1.05 for HEIP during the 2017 program year. As a result, the Company stated that it did not intend to terminate the program on March 31, 2017.

On July 20, 2017, the Company filed an application in the same docket seeking approval of additional modifications to HEIP. The proposed modifications included the removal of measures that were not cost-effective, restructuring the incentives for several of the measures that would remain, and generally aligning the program with a similar program offered by DEC. DEP also proposed to rename HEIP the Residential Smart $aver EE Program. The projected TRC for the Residential Smart $aver EE Program at the time of the filing was 1.23. The Public Staff stated that the program overall appeared to be cost-effective, but also noted that measures offered through the non-referral channel are not cost-effective. The Public Staff also acknowledged the Company's concerns related to the perception of discrimination and that the program would be considered a "pay for play" by HVAC contractors if the non-referral channel were eliminated. However, the Public Staff observed that as long as the Company continues to offer measures through the non-referral channel, the program will continue to be marginally cost-effective. The Commission approved the proposed modifications on September 11, 2017.

Witness Evans testified that despite several modifications, the Residential Smart $aver EE Program (formerly, HEIP) continues to struggle to maintain cost-effectiveness. (Tr. at 53.) More specifically, he explained that during 2016 and 2017, the Company made several changes to the program to address the erosion in the program's cost-effectiveness caused by advancement in efficiency standards and the associated lower incremental savings associated with exceeding the new standards. (*Id*.) These program changes, which included redesign of the program to include a referral channel that reduced program costs, proved successful in returning the program to cost-effectiveness in 2017 and 2018. (*Id*. at 53-54.) Unfortunately, with the application of the new lower avoided costs in 2019, the program is again projecting to no longer be cost-effective. (*Id*. at 54.) According to witness Evans, the Company is actively working to evaluate additional programmatic changes, such as the Public Staff's recommendation to transition to referral channel measures, that would offset the decline in avoided costs and make the program cost-effective in 2019 and beyond. (*Id*.)

Witness Williamson testified that the Residential Smart $aver EE program has struggled to achieve cost-effectiveness for several years due to: (1) higher efficiency standards mandated by the federal government that have increased baselines against which savings impacts have been measured; and (2) the need for large participant incentives to overcome the upfront out-of-pocket costs to participants. (*Id*. at 240.) He noted that DEP has consistently advocated the need to offer a residential HVAC replacement program. (*Id*.) Because HVAC is one of the largest energy-consuming users in homes, Witness Williamson agreed that a well-designed, cost-effective program that encourages adoption of higher efficiency HVAC equipment is fundamental for any utility EE portfolio. (*Id*.) He noted that DEP has also indicated the importance of maintaining its trade ally network. (*Id*.) Witness Williamson agreed that it is desirable to maintain a good vendor network that provides customers with accurate, reliable information on HVAC energy consumption and other assistance. Nevertheless, he expressed concern that ratepayers should not be required to pay for a program that is not cost-effective, especially when cost-effectiveness projections continue on a downward trend.

In the Sub 1145 proceeding, the Commission's Order stated that "if the Commission-approved modifications do not maintain or improve the program's cost-effectiveness by the next DSM/EE rider proceeding, the program should be terminated at the end of 2018." Because the Residential Smart $aver EE Program's performance has not improved, Witness Williamson recommended that the program be closed at the end of 2018.

Witness Neme encouraged the Company to focus on promoting longer-lived major measures, such as those included in the Residential Smart $aver EE Program. (*See* Tr. at 120, 159-160.) He suggested that the Company make efforts to increase participation in rebate offers for high-efficiency heat pumps, central air conditioners, heat pump water heaters, pool pumps, attic insulation, air sealing, and duct sealing. (*Id*. at 159.) He stated that there should be significant savings potential from these measures as they address the largest electricity end-uses in homes. (*Id*.)

In his rebuttal testimony, witness Evans responded to witness Williamson's recommendation that the Residential Smart $aver Program be terminated. He testified that the Company believes that terminating the only program that offers assistance for making the largest single energy user in the home, a customer's HVAC system, more energy efficient does not seem reasonable, especially when the decision to make said investment only comes around once every fifteen years. (*Id*. at 79.) He also noted that the recommended termination of the program does not take into consideration the Company's relationships with HVAC contractors. (*Id*.) According to witness Evans, the proposed termination will likely erode trust and engagement with these valuable "trade allies," making it difficult to offer similar types of programs that would require trade ally support in the future. (*Id*.)

Witness Evans explained that in the past, when the program's cost-effectiveness has struggled due to efficiency standard changes, the Company has demonstrated the ability to effectively modify the program to restore cost-effectiveness and should have the opportunity to attempt to restore to the cost-effectiveness of the program that was eroded by reduction in avoided costs. (*Id*. at 79-80.) He indicated that Company is currently investigating several opportunities to increase the cost-effectiveness of the program, including the following:

1. While the Company does have some concerns with respect to the Public Staff's recommendation to move the program to an all-referral structure, DEP is not opposed to adopting this proposal so long as the Commission deems it appropriate. However, in lieu of moving to a referral only approach, the Company's program management team has developed a number of potential revisions to the referral program that will improve cost-effectiveness and lead to a more gradual transition to a referral only approach. The Company believes that these modifications would result in improving the program and the cost-effectiveness tests referenced in Witness Williamson's testimony;
2. The Company has been reevaluating and updating studies of the incremental costs actually being paid by customers to adopt higher efficiency equipment. This work will ensure that the Company's cost-

effectiveness analysis is consistent with the current market conditions and reflects the changes in equipment pricing that occur as the new higher efficiency standards have been in place for a longer period of time. The Company believes that such information could lead to improvements in the program's TRC scores; and

3. The Company's program management team has been working with the third-party vendor used in program administration (payment processing) to further reduce program costs and increase the TRC score. (*Id*. at 80-81.)

Witness Evans testified that the Company is confident that the combination of these actions will restore cost-effectiveness and that shutting down the current operations without an appropriate time frame for planning and adjustment is not the best answer for its customers. (*Id*. at 81.)

The Commission agrees with witnesses Evans, Neme, and Williamson that a residential HVAC program is an important program for an electric utility to offer as part of its DSM/EE portfolio. All three witnesses testified that the HVAC is one of the largest – if not, the largest – energy-consuming appliances in the home. In addition, as noted by witnesses Neme, the long measure life of an HVAC unit makes it particularly important to maintain this program as part of the Company's portfolio. A rebate for a high-efficiency HVAC unit could lead to savings for many years to come.

Both witnesses Evans and Williamson also recognize that DEP's relationship with its trade ally network – i.e., the HVAC contractors that service participants in the Residential Smart $aver EE Program – is important to maintaining a viable HVAC program. The Commission agrees with witness Evans that a termination of the program would those valuable relationships at risk, which could jeopardize the Company's ability to offer an HVAC program in the future. Accordingly, the Commission finds and concludes that the Residential Smart $aver EE Program should not be terminated at this time. That said, the Commission is mindful of the Public Staff's concerns that ratepayers not pay for non-cost-effective programs. Based on the Company's persistent efforts to maintain the viability of the program through program modifications, as well as the negative impact on the Company's PPI if the program continues to struggle to maintain cost-effectiveness, the Commission believes that DEP is highly motivated to continue to find ways to improve cost-effectiveness. To that end, witness Evans outlined a number of ways in which the Company could modify the Residential Smart $aver EE Program to improve cost-effectiveness. Thus, the Commission directs the Company (1) to propose modifications to this program no later than December 31, 2018, with the goal of restoring the TRC score to 1.00 or greater, and (2) to include a discussion of the impact those modifications and other actions it has taken to improve cost-effectiveness in next year's DSM/EE rider proceeding.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NOS. 10-12

The evidence for these findings of fact can be found in the testimony and exhibits of DEP witness Evans and the testimony of Public Staff witness Williamson.

DEP witness Evans testified regarding the EM&V process, activities, and results presented in this proceeding. (*See* Tr. at 65-68.) He explained that the EMF component of the Company's DSM/EE rider incorporates actual customer participation and evaluated load impacts determined through EM&V and applied pursuant to the Revised Mechanism. (*See id*.) In addition, actual participation and evaluated load impacts are used prospectively to update estimated NLR. (*See id.* at 67.) In this proceeding, the Company submitted, as exhibits to witness Evans' testimony, detailed completed EM&V reports or updates for the following programs:

- CIG Demand Response Automation – 2016 (Evans Exhibit A)
- EE Education Program – 2015 & 2016 (Evans Exhibit B)
- EnergyWise Home Demand Response Program – Summer 2016 (Evans Exhibit C)
- EnergyWise Home Demand Response Program – Winter 2016 & 2017 (Evans Exhibit D)
- Multi-Family EE Program – 2015 & 2016 (Evans Exhibit E)
- Non-Residential Smart $aver Program (Prescriptive) – 2016 & 2017 (Evans Exhibit F)
- EnergyWise for Business Program – 2016 (Evans Exhibit G)
- EE Lighting Program – 2016 & 2017 (Evans Exhibit H)
- MyHER Program – 2016 (Evans Exhibit I)
- Small Business Energy Saver Program – 2015 & 2016 (Evans Exhibit J)
- Save Energy and Water Kit Program – 2016 (Evans Exhibit K)

In his testimony, Public Staff witness Williamson testified that with respect to program vintages for which EM&V reports were filed in this proceeding, he does not recommend any adjustment to the impacts at this time. (Tr. at 259.) He also testified that he had confirmed through sampling that the changes to program impacts and participation were appropriately incorporated into the rider calculations for each DSM and EE program, as well as the actual participation and impacts calculated with the EM&V data.

(*Id*. at 260.) Witness Williamson stated his belief that DEP was appropriately incorporating the results of EM&V into the DSM/EE rider calculations consistent with Commission orders and the Mechanism. (*Id*.)

In addition, witness Williamson stated that DEP had adopted his EM&V-related recommendations made in the 2017 DSM/EE rider proceeding (Sub 1145), to the extent these recommendations are applicable to the EM&V reports filed in this proceeding. (*Id*. at 254-255.) He noted that it was his understanding that DEP's EM&V evaluator intended to incorporate these recommendations in future EM&V reports. (*Id*. at 255.) Witness Williamson testified that in Sub 1145, he also recommended that the EM&V reports for the Multi-Family EE Program and the Small Business Energy Saver Program be revised before accepting them as complete. (*Id*. at 259.) These reports have been revised and submitted in this proceeding as Evans Exhibits E and J, respectively. (*See id*.) Witness Williamson stated that the Public Staff's review indicates that the Company appropriately incorporated the Public Staff's previous recommendations into these EM&V reports. (*Id*.) Therefore, he recommended that they be considered complete for purposes of calculating program impacts in this proceeding. (*Id*.)

Mr. Williamson also provided recommendations concerning the content of future EM&V studies for the Company's EE Lighting Program, noting that DEP's implementation of these recommendations would be subject to the consideration of whether the recommendation would be cost prohibitive. (*Id*.) Public Staff witness Williamson recommended that:

1. The program evaluator should include the basis for the selected weighting methodology (weightings based on bulb sales, measure savings, or other

metric) when assessing program savings. The program evaluator should also indicate what other weighting methodologies were considered and why they were rejected, and why the selected methodology is preferable;

2. The program evaluator should provide further clarity into the sales of incentivized bulbs at dollar/discount stores to determine the income levels of customers purchasing these bulbs; and

3. The program evaluator should update its study on the percentage of bulb sales to residential and non-residential customers. (*Id*. at 255-256.)

With respect to witness Williamson's first EE Lighting EM&V recommendation, Company witness Evans indicated that the Company agrees to ensure that in future evaluations, the evaluator will detail the rationale for the selected weighting methodology and indicate the reasons why it was chosen over other weighting methodologies. (*Id*. at 84.)

Witness Evans also addressed witness Williamson's recommendation that the EE Lighting Program evaluator should, in future evaluations, provide further clarity into the sales of incentivized bulbs at dollar/discount stores to determine the income levels of customers purchasing these bulbs. (*Id*.) This information would be used as an element in the determination of Net-to-Gross ("NTG") levels. (*Id*.) Witness Evans explained that the Company recognizes that in-store intercepts are the most reliable method to estimate NTG levels among dollar/discount stores. With the use of in-store intercepts, there is no need to determine the income levels of customers purchasing these bulbs, since the NTG would be determined by customers' responses to the NTG battery of questions. (*Id*.) However, witness Evans testified that evaluators initially planned to conduct in-store intercepts in a prior evaluation, but were not able to gain access to the retail stores. (*Id*. at 84-85.) He noted that even if retailer access was allowed, the cost of such an endeavor would be prohibitive, considering generally low LED sales volume at each individual store. (*Id*. at 85.) In order to satisfy confidence and precision requirements around the NTG estimate, the evaluators would have to either spend a lot of time at each store, conduct intercepts in many stores, or both. (*Id*.) Witness Evans noted that no other reliable options exist to determine the income levels of customers purchasing these bulbs at dollar/discount stores. (*Id*.)

Similarly, with respect to witness Williamson's third recommendation, the Company believes that in-store intercepts are the only method that would allow evaluators to update an estimate of bulb sales share between residential and non-residential customers. (*Id*.) As noted above, without access to participating retailers to conduct intercepts, the evaluator is unable to develop an updated estimate. (*Id*. at 85-86.) Witness Evans indicated that the Company will continue to work with Lighting Program Management to identify alternative methods to potentially update the residential/non-residential sales split. (*Id*. at 86.)

Witness Williamson indicated that while the Public Staff has confidence in the methodology applied to complete the evaluation of the MyHER Program and believes the overall savings appear to be reasonable, the Public Staff would like to conduct additional review of the data used in the evaluation. (*Id*. at 258.) Witness Williamson concluded that, with the exception of the EM&V Report for the MyHER Program (Evans Exhibit I), the EM&V of the vintages of the measures covered by the remaining reports filed in this proceeding should be considered complete.

With the exception of the Public Staff's recommendation for continued review of the MyHER EM&V report (which was not disputed by DEP), no party contested the EM&V information submitted by the Company. The Commission therefore finds that: (1) the EM&V reports filed as Evans Exhibits A, B, C, D, E, F, G, H, and K are acceptable for purposes of this proceeding and should be considered complete for purposes of calculating program impacts; (2) that the results of the EM&V report for the MyHER Program (Evans Exhibit I) are accepted conditionally for purposes of this proceeding, and that the Public Staff may continue to review this report and offer further recommendations in the next DSM/EE rider proceeding; and (3) that that Public Staff witness Williamson's recommendation that future EM&V reports for the Company's EE Lighting Program should include a discussion of (a) the basis for the selected weighting methodology (weightings based on bulb sales, measure savings, or other metric) when assessing program savings, and (b) what other weighting methodologies were considered and why they were rejected, and why the selected methodology is preferable.

In light of witness Evans' testimony regarding the cost and infeasibility of in-store intercepts, the Commission declines to require implementation of witness Williamson's recommendations that the EE Lighting program evaluator should provide further clarity into the sales of incentivized bulbs at dollar/discount stores to determine the income levels of customers purchasing these bulbs or that the program evaluator should update its study on the percentage of bulb sales to residential and non-residential customers at this time.

Based upon the testimony and evidence cited above, the Commission finds that the net energy and capacity savings derived from the EM&V to be reasonable and appropriate. Further, the Commission concludes that DEP is appropriately incorporating the results of EM&V into the DSM/EE rider calculations.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 13

The evidence for this finding of fact can be found in the testimony of DEP witnesses Evans.

The Commission's *Order Approving DSM/EE Rider and Requiring Filing of Proposed Customer Notice*, issued on November 16, 2015 in Docket No. E-2, Sub 1070, provided that DEP shall file all changes in annual ratios of allocations between non-DSDR and DSDR equipment, report the degree of change in its annual DSM/EE rider filing, and provide such changes to the Public Staff as they become available. Witness Evans informed the Commission that a review of 2016 units showed that no change in the allocation ratio applicable to capacitors was necessary for 2018. (Tr. at 58.) The allocation ratio applied to regulators was elevated from 77.79 percent to 79.45 percent for 2018. (*Id.*) He stated that 2017 units would be reviewed, and any changes would be communicated to the Public Staff and implemented on January 1, 2019. (*Id.*) The Commission concludes that DEP should continue to file reports of changes to its allocations between non-DSDR and DSDR equipment in future proceedings and provide the Public Staff with information on any changes to the allocation factor as they become available.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 14

The evidence in support of this finding can be found in the testimony and exhibits of Company witness Duff; the testimony and exhibits of Public Staff witnesses Maness, Hinton, and Williamson; and various Commission orders.

Background

Paragraphs 69 and 70 of the Revised Mechanism set out the method for determination of avoided capacity costs as follows:

> 69. For the PPI for Vintage Year 2016, the per kW avoided capacity costs used to calculate avoided cost savings shall be the avoided capacity cost rates approved by the Commission for DEP in the most recent biennial avoided cost proceeding as of the date of the filing of the 2015 DSM/EE cost and incentive recovery proceeding. The per kWh avoided energy costs shall be those reflected in or underlying the most recently filed integrated resource plan (IRP).
>
> 70. For the PPI for Vintage Years after 2016, the presumptive per kW avoided capacity costs and per kWh avoided energy costs used to calculate avoided cost savings shall be those determined pursuant to paragraph 69 above. However, if at the time of initial estimation of the PPI for each vintage year after 2016, either (a) the Company's per kWh avoided energy costs calculated for the purposes of the Company's annual IRP or resource plan update filings have increased or decreased by 20% or more or (b) the Company's per kW avoided capacity costs reflected in the rates approved in the biennial avoided cost proceedings have increased or decreased by 15% or more, the avoided costs (both energy and capacity) will be updated for purposes of the DSM/EE rider proceeding.

The parties sometimes referred to the method for updating avoided costs under Paragraph 70 of the Revised Mechanism as the "trigger" or "ratchet" method, in that avoided costs would remain the same unless and until the specified thresholds were met – either a change in avoided energy costs of at least 20% or a change in avoided capacity costs of at least 15% – which would then trigger an update of both avoided energy and avoided capacity costs. In addition, under Paragraph 70 of the Revised Mechanism, avoided energy costs and avoided capacity costs were derived from two different sources:

the annual IRP or resource plan update filings for avoided energy and the biennial avoided cost proceedings for avoided capacity.

In DEP's 2017 DSM/EE proceeding (Sub 1145), the Public Staff and DEP discovered that they had differing interpretations as to the appropriate avoided costs to be used in calculating the 2018 DSM/EE rider pursuant to Paragraph 70 of the Revised Mechanism. The Public Staff believed that the "ratchet" that would cause avoided capacity and energy costs to be updated for purposes of the DSM/EE rider proceeding had been triggered for purposes of the PPI to be calculated for Vintage 2018. The Company maintained that the ratchet had not been triggered. Had avoided cost rates been updated in a manner consistent with the Public Staff's interpretation of Paragraph 70, the Vintage 2018 PPI would have been reduced by approximately $3.3 million.

The Company and the Public Staff eventually reached a comprehensive agreement (the "Sub 1145 Agreement" or "Agreement") resolving their differences which consisted of (1) a monetary adjustment which reduced the Vintage 2018 PPI by $2.1 million; and (2) certain revisions to the Revised Mechanism, including the method by which avoided costs would be updated for purposes of the PPI and DSM/EE program cost-effectiveness. In particular, DEP and the Public Staff recommended certain changes to Paragraphs 18, 22, and 70 of the Mechanism, and the addition of new Paragraphs 22A through 22D and 70A. The Commission approved the Sub 1145 Agreement and the resulting revisions to the Revised Mechanism in the Sub 1145 Order.[1]

[1] In DEC's 2017 DSM/EE proceeding (E-7, Sub 1130, or "Sub 1130"), DEC and the Public Staff encountered the same disagreement over whether the avoided cost ratchet had been triggered for purposes of DEC's 2018 DSM/EE rider. DEC and the Public Staff eventually reached a resolution (the "Sub 1130 Agreement") which consisted of (1) a monetary adjustment which reduced the Vintage 2018 PPI (which in DEC's case amounted to a $6.75 million adjustment); and (2) revisions to DEC's cost recovery mechanism, including the method by which avoided costs would be updated for purposes of the PPI and DSM/EE program cost-effectiveness. The Sub 1130 Agreement and resulting revisions to DEC's cost recovery

Paragraph 70A now governs the calculation of the PPI, and provides that:

> For the PPI for Vintage Years 2019 and afterwards, the program-specific per kW avoided capacity benefits and per kWh avoided energy benefits used for the initial estimate of the PPI and any PPI true-up will be derived from the underlying resource plan, production cost model, and cost inputs that generated the avoided capacity and avoided energy credits reflected in the most recent Commission-approved Biennial Determination of Avoided Cost Rates for Electric Utility Purchases from Qualifying Facilities as of December 31 of the year immediately preceding the date of the annual DSM/EE rider filing. However, for the calculation the underlying avoided energy credits to be used to derive the program- specific avoided energy benefits, the calculation will be based on the projected EE portfolio hourly shape, rather than the assumed 24x7 100 MW reduction typically used to represent a qualifying facility.

Paragraph 18 (which governs the calculation of cost-effectiveness for program approval filings) and Paragraph 22 (which governs continuing cost-effectiveness for existing programs) were revised to reflect the same method for determining avoided costs.[2]

In the most recent Biennial Determination of Avoided Cost Rates for Electric Utility Purchases from Qualifying Facilities ("Avoided Cost Proceeding") in Docket No. E-100, Sub 148 ("Sub 148"), the Commission was faced with whether certain changes to the previously-approved methods used to calculate avoided cost rates and to the current framework for implementing Section 210 of the Public Utility Regulatory Policies Act of 1978 ("PURPA") were warranted given the amount and pace of the development of

mechanism were approved by the Commission in its *Order Approving DSM/EE Rider, Revising DSM/EE Mechanism, and Requiring Filing of Proposed Customer Notice*, issued in Sub 1130 on August 23, 2017, prior to the Sub 1145 proceeding. The Sub 1130 Agreement and the resulting revisions to DEC's cost recovery mechanism are substantively the same as – and, in fact, are the basis of – the Sub 1145 Agreement and the resulting revisions to DEP's Revised Mechanism approved in Sub 1145.

[2] The Public Staff refers to the method for calculating avoided cost rates pursuant to revised Paragraph 18 and new Paragraphs 22A and 70A as the "PURPA method."

qualifying facilities ("QFs"), and in particular solar-powered QFs, in North Carolina. *See Order Establishing Standard Rates and Contract Terms for Qualifying Facilities*, Docket No. E-100, Sub 148, October 11, 2017 ("Sub 148 Order"). The issue arose as to whether utilities should have to pay QFs for capacity in years in which they do not have a capacity need. Witnesses in the proceeding described significant growth in solar production in the State resulting in over-supply, operational challenges, and artificially high costs passed on to North Carolina residents, businesses, and industries. *Id*. at 9-14. Both DEP and DEC proposed, and a number of parties, including the Public Staff, agreed, that a utility should include zeros in the calculation of capacity rates for the years in which the utility does not have a capacity need. *Id*. at 39, 41, 46.

While the case was pending, N.C. Gen. Stat. § 62-156(b)(3) was amended by the General Assembly to provide, with respect to power sales by small power producers to public utilities:

> A future capacity need shall only be avoided in a year where the utility's most recent biennial integrated resource plan filed with the Commission pursuant to G.S. 62-110.1(c) has identified a projected capacity need to serve system load and the identified need can be met by the type of small power producer resource based upon its availability and reliability of power, other than swine or poultry waste for which a need is established consistent with G.S. 62-133.8(e) and (f).

In the Sub 148 Order, the Commission concluded that with regard to QFs that are small power producers, N.C. Gen. Stat. § 62-156(b)(3) requires that when calculating avoided capacity rates using the peaker method, it is appropriate to require a payment for capacity in years of a utility's IRP forecast period only when a capacity need is demonstrated during that period. The Commission found that providing a levelized capacity payment over the term of the standard offer contract is a reasonable means of implementing this capacity payment. *Id*. The Commission also determined that this avoided capacity payment methodology is appropriate with regard to the standard offer to purchase available to QFs that are not small power producers. *Id*. The Commission based this change in methodology upon the "changed economic and regulatory circumstances facing QFs and utilities" – namely, the increasing amount of solar powered QF development activity and its impact on utilities' systems and rates. *See id*. at 15, 19, 48.

The underlying IRP for purposes of the Sub 148 proceeding – DEP's 2016 IRP – does not show a capacity need until 2022. As such, the Commission's ruling in Sub 148 results in avoided capacity rates that use a zero value for capacity for the years 2019 to 2021. However, that ruling does not apply to QFs that established a legally enforceable obligation ("LEO") prior to the date the Company made its avoided cost filing in Sub 148. *See, e.g., Order Establishing Standard Rates and Contract Terms for Qualifying Facilities*, Docket No. E-100, Sub 136, February 21, 2014, at 33 ("[a] QF has a right to long-term avoided cost contracts or other LEOs with rates determined at the time the obligation is incurred, even if the avoided costs at the time of delivery ultimately differ from those calculated at the time the obligation is originally incurred."). As a result, QFs establishing a LEO after November 15, 2016 ("new QFs") receive a capacity value that is zero in years 2019 through 2021; QFs that established LEOs prior to November 15, 2016 (legacy QFs) receive a capacity value that is not zero in years 2019 through 2021. *See e.g., Order Setting Avoided Cost Parameters*, Docket No. E-100, Sub 140, December 31, 2014 (Commission declines to approve utilities' request to not include the cost of capacity in years where the utility does not show a need for capacity when calculating avoided cost rates at that time).

In this case, the Public Staff contends that DEP is required by the Revised Mechanism and the Sub 148 Order to use zero as the input when calculating the avoided capacity values for DSM/EE until 2022, when DEP's IRP shows a capacity need. Based on this position, the Public Staff recommends that the avoided capacity cost benefits for purposes of the PPI and cost-effectiveness of the Company's DSM/EE programs be calculated under the assumption that capacity avoided prior to year 2022 be assigned a zero dollar value. Since the Company did not apply this method to calculate the estimated PPI for Vintage 2019, the Public Staff recommends that the estimated Vintage 2019 PPI proposed by DEP in this case be adjusted to reflect this assumption.

In DEC's most recent DSM/EE rider proceeding in Docket No. E-7, Sub 1164, the Commission rejected this exact same argument, holding that "It is inappropriate to calculate the avoided capacity cost benefits for purposes of the PPI and cost-effectiveness of the Company's DSM/EE programs under the assumption that capacity avoided prior to year 2023[3] be assigned a zero dollar value. The Public Staff's recommendation of such, and the corresponding reduction to the Company's Vintage 2019 PPI, is rejected." *See Order Approving DSM/EE Rider and Requiring Filing of Customer Notice*, Docket No. E-7, Sub 1164, September 11, 2018, at 10 ("Sub 1164 Order").

Summary of Testimony

In this proceeding, the parties agree that the applicable Avoided Cost Proceeding for the DSM/EE rider effective January 1, 2019 is Sub 148. The key issue in dispute between the Company and the Public Staff is whether because the Company does not

[3] DEC's 2016 IRP does not show a capacity need until 2023.

show a capacity need until 2022, the Company is required by the Sub 1145 Agreement and the Sub 148 Order to use zero as the input when calculating its avoided capacity values for DSM/EE for years 2019 through 2021.

Public Staff witness Hinton testified that the Public Staff interprets the Sub 1145 Order and the Sub 148 Order to mean that the Company's avoided capacity rates for DSM/EE should reflect zero avoided capacity value in years prior to the identified need for new capacity in the Company's IRP. (Tr. at 216-21.) He explained that as a result of the Commission ruling in the Sub 148 Order, "new" QFs seeking to sell their energy and capacity to DEP will not be paid capacity payments until new capacity is needed in 2022, as identified in the Company's 2016 IRP.[4] (*Id*. at 215.)

Witness Hinton pointed out that the Commission noted in the Sub 148 Order that "in addition to providing the basis for electric power purchases from QFs by a utility, the Commission determined avoided costs are utilized in, among other applications, the determination of the cost-effectiveness of DSM/EE programs and the calculation of the performance incentives for such programs..." (*Id*. at 216.) Though he acknowledged that the focus of his testimony in DEP's 2017 DSM/EE rider proceeding (Sub 1145) was on the use of PURPA-based models to determine the appropriate avoided energy cost, witness Hinton asserted that his testimony in DEC's parallel 2017 rider proceeding (Sub 1130) linked the PURPA-based avoided capacity and energy costs to the savings and financial incentives of the Company's DSM/EE programs. (*Id*. at 221.) As a result, he concluded that in order to be consistent with the Sub 148 Order and the Mechanism,

[4] New QFs under the standard offer tariff will receive capacity payments in years prior to the utilities' first capacity need because the new QFs will receive a levelized capacity rate reflecting a lower annual payment to account for those initial years in which there are no avoidable capacity costs. Sub 148 Order, pp. 40, 48.

"determinations of ongoing cost-effectiveness and utility incentives of both new DSM/EE programs and new vintages of existing DSM/EE programs starting in vintage 2019 should be based on avoided capacity rates that reflect zero avoided capacity value in years prior to the identified need for new capacity in the Company's IRP (2022)." (*Id*. at 217.)

Witness Hinton testified that the Public Staff believes that the Company was not consistent with Sub 148 and the Mechanism in how it applied avoided capacity value with respect to its DSM/EE programs. (*Id*.) He stated that, in assessing the ongoing cost-effectiveness of its DSM/EE programs and the appropriate level of utility incentives, the Company applied the approved avoided capacity rate in all years of the measures lives for its programs, as opposed to applying zero capacity values in years prior to the need for new capacity. (*Id*.)

Witness Hinton noted that in response to data requests, the Company contended DSM/EE is distinct from QFs in that without DSM/EE in the IRP, there would be an immediate need for new capacity. (*See id*. at 218-219.) The Company maintained that the very fact that the DSM/EE portfolio has been included in the resource plan is why there is not a capacity need until 2022. (*Id*. at 219.) As such, the Company's position is that the DSM/EE within the IRP has capacity value and should receive avoided capacity benefits in all years. Witness Hinton disagreed, stating that in his opinion, the utilization of the existing block of DSM/EE programs in the IRP does not justify an exception from the use of zero capacity values. (*Id*. at 222-223.)

Public Staff witness Maness testified that he concurs with witness Hinton's recommendation that the avoided capacity cost benefits for purposes of the PPI and cost-effectiveness of the Company's DSM/EE programs be calculated under the assumption that capacity avoided prior to year 2022 be assigned a zero dollar value. (*Id*. at 193.) Since the Company did not apply this method to calculate the estimated PPI for Vintage 2019, witness Maness recommended that the estimated Vintage 2019 PPI proposed by DEP in this case be adjusted to reflect this assumption. (*Id*. at 194.) He testified that the Public Staff asked the Company to provide a calculation of estimated avoided cost benefits related to Vintage Year 2019 under the assumption that avoided capacity kW occurring prior to year 2022 is assigned a zero dollar value. (*Id*.) According to the Company's calculation, making this assumption reduces the estimated Vintage 2019 system-level PPI (before levelization) from $14,913,197 to $13,404,068, a decrease of $1,509,129. (*Id*. at 194-195.) He also recommended that the $1,509,129 reduction in the system PPI be included in all future true-ups of the Vintage 2019 DSM/EE revenue requirement and billing factors. (*Id*. at 200.) In his supplemental testimony, witness Maness testified that the rate period 2019 revenue requirement impact of the Public Staff's recommended adjustment to reduce the avoided costs used in the determination of the PPI to reflect a value of zero is a reduction of $488,550.[5] (*Id*. at 208-209.) Witness Maness incorporated this reduction into his recommended billing factors as set forth on Maness Exhibit II.

Public Staff witness Williamson discussed the impact to the cost-effectiveness of the Company's DSM/EE portfolio that would result from applying zero capacity value for years prior to 2022, in accordance with the Public Staff's recommendation. (*Id*. at 250-251.) Williamson Exhibit 3 shows the decrease in cost-effectiveness scores for each

[5] Witness Maness noted that, if accepted by the Commission, the long-term impacts of this adjustment will be significantly greater, in total, because a given vintage year's PPI is typically amortized over several years into the future; the $488,550 figure represents only one of those years. (Tr. at 209.)

program when no capacity value is given for years that DEP's 2016 IRP does not show a capacity need. (*Id*. at 250.) As mentioned above, in addition to the programs that were not cost-effective under the TRC test according to the Company's calculations, DEP's Residential New Construction, EE for Business, and EnergyWise for Business programs would no longer be cost-effective under the Public Staff's methodology. (*Id*. at 251.)

In his rebuttal testimony, DEP witness Duff explained that the Company strongly disagrees with the Public Staff's recommendation that the avoided capacity cost benefits for purposes of the PPI and cost-effectiveness of the Company's DSM/EE programs be calculated under the assumption that capacity avoided prior to year 2022 be assigned a zero dollar value. (*Id*. at 92.)

Witness Duff described the Sub 1145 Agreement and explained why the Company believes that the Agreement does not support the Public Staff's position. According to witness Duff, one of the primary purposes for the Sub 1145 revisions to the mechanism was to eliminate the previous "trigger" approach for updating avoided costs, so that avoided energy and capacity costs are updated essentially every two years instead of waiting for certain thresholds to be met. (*See id*. at 95-96.) The second primary purpose of the Agreement is that it changed the source and methodology for calculating avoided energy costs which previously had been based on the IRP, so that like avoided capacity costs, they would now be derived from the biennial avoided cost proceeding. (*Id*. at 96-97.) He indicated that the revisions to the Revised Mechanism approved by the Commission in Sub 1145 did not change the data source or methodology by which the Company was to calculate avoided capacity costs. (*See id*. at 97-99.)

Witness Duff described how, consistent with the revisions to DEP's DSM/EE cost recovery Mechanism that the Commission approved in the Sub 1145 Order, the Company derived both the avoided energy and avoided capacity using the rates approved in the Company's most recent biennial avoided cost proceeding, which in this case is Sub 148. (*Id*. at 97.) In particular, he noted that the Company utilized the avoided capacity value calculated using the peaker method consistent with the Company's understanding of the Sub 1145 Agreement, which, in the Company's view, did not modify the approach used in past DSM/EE proceedings. (*Id*. at 98.)

He explained how the Company's application of avoided capacity values for its DSM/EE programs is also consistent with Public Staff witness Hinton's testimony in last year's DSM/EE proceedings for DEP (Sub 1145) and DEC (Sub 1130). In fact, the Company agrees with Public Staff witness Hinton's testimony that the rates paid QFs are generally linked to the avoided cost rates utilized for DSM/EE; however, that does not mean the rates are the same. (*Id*. at 99-100.)

Witness Duff also testified about how the Company's application of values for avoided capacity for DSM/EE is also consistent with calculations the Company provided the Public Staff when the parties reached the Sub 1145 Agreement, which showed what the change in Vintage 2019 PPI would be under the proposed revisions to the Revised Mechanism if the avoided costs rates pending before the Commission in Sub 148 were approved. (*Id*. at 100.) This analysis clearly reflected avoided capacity values in the years 2019 through 2021, rather than the zero value advocated by witness Hinton. (*Id*.)

In addition, witness Duff described how in December 2017 – after both the Sub 1145 Order and Sub 148 Order had been issued – DEP filed for approval of the addition of a new measure to the Company's EnergyWise Program in Docket No. E-2, Sub 927.[6] (*Id*. at 101.) Witness Duff noted that the Company included avoided capacity values that were *not* zero in this filing. (*Id*.) The Public Staff examined the cost-effectiveness evaluations the Company provided in its application and recommended approval of the program modification, despite the fact that the filing clearly reflected avoided capacity values, as opposed to the zero value the Public Staff now advocates. (*Id*. at 101-102.)

Witness Duff also disagreed with the Public Staff's argument that the Sub 148 Order dictates that the Company must use zero values instead of capacity values for existing DSM/EE programs. He explained how witness Hinton quoted the Sub 148 Order out of context, and that the language witness Hinton referenced does not support the Public Staff's position. (*Id*. at 102-103.)

Next, witness Duff explained why DEP believes the Public Staff's approach is inappropriate and underestimates the value of the Company's DSM/EE programs. Witness Duff testified that the Public Staff's adjustment would remove the avoided capacity value of DSM/EE in the years 2019 to 2021 for purposes of evaluating cost-effectiveness and PPI, a removal of capacity value for 951 MW of DSM impacts and 128 MW of EE impacts of summer capability from DEP's portfolio of DSM/EE programs. (*Id*. at 106.)

Witness Duff indicated that legacy DSM programs are embedded in the resource plan, and like legacy QFs with LEOs existing prior to November 15, 2016, should receive a capacity value in the 2019 to 2021 time period. (*See id*. at 104-105.) He disagreed with

[6] Revised Paragraph 18 of the Company's cost recovery mechanism provides that for program approval filings the Company shall use the same method as prescribed by revised Paragraph 70A, with the avoided capacity and energy benefits derived from the most recent Commission-approved Avoided Cost Proceeding as of the date of the filing for approval.

witness Hinton's contention that the Company's existing DSM programs should be treated differently from existing QFs with regard to receiving avoided capacity value based on contract length. (*Id*. at 103-104.) Witness Hinton bases his contention on the assumption that while existing QFs are under long-term contracts of up to ten years, customers who participate in DSM are under a contract for one year. (*See id*.) First, witness Duff clarified that while residential customers do have the ability to cease participation in the residential DSM program after one year, non-residential customers who elect to participate in the Company's CIG Demand Response Automation Program agree to a contract period of five years, with automatic extensions of two years thereafter, unless terminated by either party at the end of the contract period with at least 60 days prior written notice. (*Id*. at 104.)

Second, while acknowledging that the majority of the Company's EE programs do not require the customer to sign a contract, witness Duff stated that one EE program, MyHER, is effectively in the same position as the legacy DSM programs. (*Id*.) He noted that the MW capability provided by the MyHER EE program was created prior to the establishment of the new avoided cost rates. (*Id*.) According to witness Duff, all that is required is the expenditure of funds to maintain the impacts, just like the Company must do to maintain the availability of the impacts from the legacy DSM programs. (*Id*.) Like the Company's legacy DSM programs, the MyHER program impacts are also not incremental or new after November 2016. (*Id*.) He stated that they are embedded in the resource plan, and like legacy QFs with LEOs existing prior to November 15, 2016, should receive a capacity value in the 2019 to 2021 time period. (*Id*. at 104-105.)

With respect to the other EE programs (aside from MyHER), witness Duff indicated that there is a summer capacity need of 216 MW (166 MW for the winter) from the EE programs in the year 2022. (*Id*. at 105.) He observed that, "Those familiar with the implementation of EE programs will recognize that one does not create 216 MW of EE overnight. It takes time. It takes time to build customer awareness. It takes time for equipment to wear out and be replaced or for customers to recognize that it is time to change out equipment." (*Id*.) In addition, he noted in the Company's IRP, the EE impacts are subtracted from the load forecast. (*Id*.) As a result, there is no reserve margin for the EE impacts. (*Id*.)

Witness Duff testified that the very fact that DSM/EE capacity savings from existing approved programs are included in the IRP forecast are a critical part of why there is not a capacity need until 2022. (*Id*. at 107.) The Company's inputs to the IRP for the cost of the DSM and EE programs include not just the implementation cost, but also the estimate of the utility's PPI, which contains a capacity value for the years 2019 through 2021. (*Id*.) As a result, to be consistent with the underlying resource plan, including the cost inputs, one should be including the avoided capacity cost for DSM/EE for the years 2019 to 2021. (*Id*.)

Witness Duff also testified that he does not believe that a Commission decision to adopt the Public Staff's recommendation is consistent with North Carolina policy. (*Id*. at 105.) He explained that witness Hinton's testimony appears to imply that existing QFs are somehow a superior resource compared to ongoing participation in existing DSM/EE programs. (*Id*. at 106.) Witness Duff disagreed, stating that incremental new EE impacts from existing approved programs should be viewed as a priority resource and not an inferior resource, as witness Hinton fails to recognize the key role EE plays in the Company meeting its Renewable Energy Portfolio Standard. (*Id*.) Witness Duff observed that witness Hinton's position appears to be contradictory to the purpose of Senate Bill 3 to "promote the development of renewable energy and energy efficiency in the state through the implementation of a Renewable Energy and Energy Efficiency Portfolio Standard." (*Id*.)

Finally, witness Duff noted that the Company believes that the Commission's ruling in the Sub 1164 Order relating to avoided costs is dispositive of the avoided cost issue in this proceeding. (*Id*. at 93.) He stated that the relevant language in the DEC cost recovery mechanism is substantively identical to the relevant language in the DEP cost recovery mechanism, the agreement reached between the Public Staff and the Company which resulted in that language was substantively the same as that reached for DEC, and the rationale with which the Commission generally agreed in the Sub 1164 Order ("evaluating the contributions that DSM/EE measures make to a utility avoided future capacity needs to determine cost-effectiveness is inherently different than the evaluation undertaken to determine the capacity costs avoided through the purchase of the electric output from a QF") applies equally in this case. (*Id*. at 93-94.) Accordingly, the Company believes that the Commission should reach the same result and decline to accept the Public Staff's downward adjustment to DEP's PPI in this docket. (*Id*. at 94.)

Commission Discussion

Based on the foregoing, as well as the record in Sub 1145, the Commission finds and concludes that the Company's calculation of its proposed DSM/EE rider for 2019 is consistent with the language and intent of the Sub 1145 Agreement and Paragraphs 18, 22A, and 70A of the Mechanism. As witness Duff testified, the Sub 1145 Agreement was intended to eliminate the trigger method, so that avoided costs would be updated more frequently, and to change the source of avoided energy costs, so that avoided energy and avoided capacity rates for DSM/EE would be derived from the same proceeding. The revisions to Paragraphs 18, 22, and 70 resulting from the Sub 1145 Agreement did not alter the source or manner in which the avoided capacity costs are to be derived for the purpose of calculating cost-effectiveness and incentives associated with DSM/EE programs.

Importantly, the avoided capacity rate used for DSM/EE and the avoided capacity rate paid to a QF are not identical. This was true under the Revised Mechanism, as well as under the revisions approved in Sub 1145. For example, the Revised Mechanism states that the per kW avoided capacity costs reflected in Avoided Cost Proceeding are "used to calculate avoided cost savings" for purposes of the PPI. The revised paragraphs of the Mechanism approved in Sub 1145 provide that the program-specific per kW avoided capacity benefits shall be "derived from the underlying resource plan, production cost model, and cost inputs that generated the avoided capacity and avoided energy credits reflected in the most recent Commission-approved Biennial Determination of Avoided Cost Rates for Electric Utility Purchases from Qualifying Facilities." Stated another way, the avoided capacity cost reflected in the Avoided Cost Proceeding has always been an input to the calculation of avoided capacity benefits for purposes of DSM/EE but was never intended to be the same value. If the parties had intended for the avoided capacity rate the Company pays QFs to be equivalent to the avoided capacity rate calculated for DSM/EE, they would have said so – they did not. This much is clear from the plain language of the Mechanism.

The record also demonstrates that the Public Staff knew at the time that it entered into the Sub 1145 Agreement that the Company did not intend to apply zero values for capacity for the Vintage 2019 PPI, and that the monetary adjustment the parties agreed to as part of the Sub 1145 Agreement was based on analysis that did <u>not</u> include zero values for capacity. In his rebuttal testimony in this case, witness Duff explains that, as part of the exact same analysis the Company performed for the Public Staff that produced the $2.1 adjustment to the Vintage 2018 PPI, the Company also provided a projection of what the change in Vintage 2019 PPI would be under the revisions to Paragraph 70 if the proposed avoided cost rates pending before the Commission in Sub 148 were approved. Specifically, the Company provided a projected stream of avoided capacity costs that reflected capacity values beginning in year one (2019). The analysis provided clearly reflected avoided capacity values in the years 2019 through 2021, rather than the zero value now advocated by the Public Staff.

Further evidence that the Public Staff shared – or at least was aware of – the Company's intent, is the Public Staff's recommendation of approval of the addition of a measure to the Company's EnergyWise Program. The Company filed this program modification on December 28, 2017, after both the Sub 1145 Order and the Sub 148 Order had been issued and House Bill 589 had gone into effect. Accordingly, the Company applied the method utilizing avoided cost rates derived from the avoided capacity credits reflected in the Sub 148 Avoided Cost Proceeding to determine the cost-effectiveness of EnergyWise with the addition of the measure, as prescribed by the revisions to Paragraph 18 approved in Sub 1145. The Public Staff examined the cost-effectiveness evaluations the Company provided in its application and recommended approval of the program modification, despite the fact that the filing clearly reflected avoided capacity values, as opposed to the zero value the Public Staff now supports.

The Company has clear and consistent evidence of its intent and the Public Staff's knowledge of its intent. By contrast, the only evidence the Public Staff put forth relating to the Sub 1145 Agreement was witness Hinton's testimony in DEC's 2017 DSM/EE rider proceeding (Sub 1130). Mr. Hinton merely testified that the use of PURPA-based avoided costs (which, as mentioned above, the Company has always used for avoided capacity) links the Company's DSM/EE savings and financial incentives with the avoided cost rates it pays QFs. However, this does not necessarily support the Public Staff's position. Because the avoided costs for DSM/EE programs are derived from the underlying resource plan, production cost model, and cost inputs that generated the avoided capacity and avoided energy credits reflected in the Avoided Cost Proceeding, they are, in fact, linked to (but not the same as) the avoided cost rates the Company pays QFs. This was the case under the Revised Mechanism and is the case under the Sub 1145 revisions.

Finally, the Commission finds that adopting the Company's position with respect to this issue is consistent with the public policy of the State of North Carolina. The Public Staff's position implies that DSM/EE is the first capacity resource that should be cut out of the Company's resource plan in the event DEP's IRP does not show a need for capacity. Similarly, by urging the Commission to adopt zero avoided capacity values for DSM/EE, the Public Staff seeks to remove the financial incentive for the Company to pursue certain programs in years 2019 through 2021, and effectively sends the Company the message that it is not worth it to encourage customers to find ways to reduce their kW impact.

In addition, as avoided cost rates decrease, it becomes difficult for a DSM/EE program to produce cost-effective savings. This trend is sure to continue if zero capacity values continue to be applied through 2021. Given the ramp up time required to engage customers and build participation in DSM/EE programs, if current programs are canceled due to failing cost-effectiveness (in this case, due solely to the application of zero capacity values), it would be difficult to resurrect them once cost-effectiveness is restored.

In evaluating how to treat the Company's existing portfolio of DSM/EE programs, it is also important to recognize that DSM and EE programs are a desirable resource that is not only encouraged but mandated by the State. Senate Bill 3 was passed in August 2007 "to promote the development of renewable energy and energy efficiency through the implementation of a Renewable Energy and Energy Efficiency Portfolio Standard (REPS)." N.C. Gen. Stat. § 62-2(10). The stated goals of the legislation are to diversify the resources used to reliably meet the energy needs of consumers in the State, provide greater energy security through the use of indigenous energy resources available within the State, encourage private investment in renewable energy and EE, and provide improved air quality and other benefits to energy consumers and citizens of the State. *Id.* To this end, Senate Bill 3 provides that electric utilities "shall implement demand-side management and energy efficiency measures and use supply-side resources to establish the least cost mix of demand reduction and generation measures that meet the electricity needs of its customers." *See* N.C. Gen. Stat. § 62-133.9. Through the enactment of REPS, Senate Bill 3 also requires each electric public utility in the State to meet increasing percentages of its energy needs each year through EE measures. *See* N.C. Gen. Stat. § 62-133.8. Finally, this legislation provides that the utilities shall be compensated for their DSM/EE efforts and allows incentives to be awarded, including rewards based upon shared savings and avoided costs achieved by DSM/EE measures. *See* N.C. Gen. Stat. § 62-133.9.

Apart from Senate Bill 3, the Public Utilities Act more broadly promotes the establishment of "just and reasonable rates…consistent with long-term management and conservation of energy resources by avoiding wasteful, uneconomic and inefficient uses of energy" and encourages "harmony between public utilities, their users and the environment." *See* N.C. Gen. Stat. § 62-2(4) and (5). In addition, the Act provides that it is the public policy of the State of North Carolina to:

> To assure that resources necessary to meet future growth through the provision of adequate, reliable utility service include use of the entire spectrum of demand-side options, including but not limited to conservation, load management and efficiency programs, as additional sources of energy supply and/or energy demand reductions. To that end, to require energy planning and fixing of rates in a manner to result in the least cost mix of generation and demand-reduction measures which is achievable, including consideration of appropriate rewards to utilities for efficiency and conservation which decrease utility bills[.]

N.C. Gen. Stat. § 62-2(3a). Through Senate Bill 3 and the stated policy of the Public Utilities Act, it is apparent the legislature not only appreciates the importance of energy efficiency, but also recognizes that if a utility is not appropriately compensated and incentivized for its DSM/EE efforts (which, from a financial perspective, equate to a utility spending money to encourage its customers to buy less of its product), it is difficult to put these efforts on equal footing with supply-side resources, for which the Company receives a return.

As the Commission and the General Assembly have found, customers should not have to pay for third parties to supply generation capacity that the Company does not need – that is the crux of N.C. Gen. Stat. § 62-156 and the Sub 148 Order. However, it is far different to encourage customers to use less energy and capacity to decrease their bills. And as dictated by the State of North Carolina, this should be encouraged and reflected in the Company's rates through "consideration of appropriate rewards to utilities for efficiency and conservation which decrease utility bills."

Similarly, if the Commission had intended for DSM/EE to receive zeros, it would have said so in the Sub 148 Order. However, nowhere in the Commission's discussion of either the changed circumstances warranting the change in avoided cost methodology (Finding of Fact No. 1) nor its discussion of the adoption of the approach that new QFs should not receive payments for capacity in years in which there is no capacity need (Finding of Fact Nos. 5 and 6), does the Commission mention DSM/EE. *See* Sub 148 Order, pp. 9-19, 39-50. The only mention of DSM/EE in the Sub 148 Order (Finding of Fact No. 10) is a manner that is irrelevant to the issue at hand.[7] *Id*. at 69. While witness

[7] In particular, the Commission noted

> that in addition to providing the basis for electric power purchases from QFs by a utility, the Commission-determined avoided costs are utilized in, among other applications, the determination of the cost effectiveness of DSM/EE programs and the calculation of the performance incentives for such programs, the determination of the incremental costs of compliance with REPS for cost recovery purposes; and in some ratemaking, such as determination of stand-by rates. In these contexts, it is appropriate for the rates to be reflective of the utilities' actual forecasted rates over a longer term, not based on a short-term forecast that is fixed for the duration of a longer term."

Sub 148 Order, p. 69.

Hinton contends that the Sub 148 Order, in effect, commands that DSM/EE should receive zero capacity value, nothing in the Commission's order dictates this result.

DSM/EE by its very nature is different from a solar QF, and the policy reasons behind the Commission's shift in avoided costs methodology articulated in the Sub 148 Order simply do not apply to DSM/EE. There is no evidence in this proceeding that there is an over-supply of DSM/EE programs, that customers are paying artificially high prices for DSM/EE, or that DSM/EE is burdening the system. There is no showing of an overabundance of DSM/EE programs such that the Commission needs to send a price signal to the Company to cut back on its DSM/EE programs. In addition, in evaluating the characteristics of DSM/EE resource, it is clear that DSM/EE can help to avoid planned capacity additions. In sum, there is a fundamental difference between what the Commission and General Assembly were trying to avoid – customers paying for capacity in the form of additional generation that the Company does not need – and the Company's implementation of DSM/EE programs to encourage customers to use less energy and capacity in accordance with the policy of the State of North Carolina as expressed in Senate Bill 3 and elsewhere in the Public Utilities Act.

Finally, the Commission has already addressed this issue in the Sub 1164 Order, and finds no reason to deviate from that ruling in this case. In the Sub 1164 Order, the

---

The portion of the Sub 148 Order that contains this paragraph is specifically dealing with Finding of Fact No. 10, which does not deal with avoided capacity rates, but rather with the Commission's denial of DEC and DEP's request to reset energy rates utilized in a standard contract every two years. *See id*. at 61-70. That the Commission mentions DSM/EE in the section of its order dealing with the "two-year refresh," makes sense because several months prior, the Public Staff had noted its concern about the impact of the two-year refresh of avoided energy rates on DSM/EE to the Commission, and even incorporated its concern as a caveat to the Sub 1130 Agreement and the Sub 1145 Agreement. While the language referenced indicates the Commission believes that because the avoided energy rates are utilized in calculations associated with cost-effectiveness and performance incentives related to DSM/EE programs, they should not be updated every two years, it does not support the Public Staff's contention related the application of avoided capacity rates.

Commission held that it is inappropriate to calculate the avoided capacity cost benefits for purposes of the PPI and cost-effectiveness of the Company's DSM/EE programs under the assumption that capacity avoided prior to year 2023 be assigned a zero dollar value. Accordingly, we rejected the Public Staff's recommendation of such, and the corresponding reduction to the Company's Vintage 2019 PPI. In support of this finding, we stated:

> Based on the foregoing and the plain language of Paragraph 69 of the Mechanism, the Commission concludes that the appropriate avoided capacity benefits and per kWh avoided energy benefits to be used for the initial estimate of the PPI and any PPI true-up should be derived from DEC's IRP, production cost model, and cost inputs that generated the avoided capacity and avoided energy credits approved in the Sub 148 Order. In particular, the Commission is persuaded that if DEC and the Public Staff had achieved a meeting of the minds on simply using the avoided costs adopted in the Sub 148 Order and subsequent avoided cost proceedings, then they would have simply stated that in Paragraph 69. They did not do so. Furthermore, based on the record in this proceeding, as well as the record in Sub 1130, the Commission finds and concludes that the Company's calculation of Rider 10 is consistent with the language and intent of the Sub 1130 Agreement. As DEC witness Duff testified, the Sub 1130 Agreement was intended to eliminate the trigger method, so that avoided costs would be updated more frequently, and to change the source of avoided energy costs, so that avoided energy and avoided capacity rates for DSM/EE would be derived from the same proceeding. The revisions to Paragraphs 19, 23, and 69 resulting from the Sub 1130 Agreement did not alter the source or manner in which the avoided capacity costs are to be derived for the purpose of calculating cost-effectiveness and incentives associated with DSM/EE programs. The Commission generally agrees with the testimony of DEC's witnesses and DEC's arguments that evaluating the contributions that DSM/EE measures make to a utility avoiding future capacity needs to determine cost-effectiveness is inherently different than the evaluation undertaken to determine the capacity costs avoided through the purchase of the electric output from a QF.

Sub 1164 Order, pp. 43-44.

In this case, the plain language of the operative paragraph of the DEP Mechanism for calculating the PPI for Vintage 2019, Paragraph 70A, is identical to Paragraph 69 of the DEC cost recovery mechanism.[8] Likewise, based on the record in this proceeding and the plain language of Paragraph 70A of the Mechanism, we find that the appropriate avoided capacity benefits and per kWh avoided energy benefits to be used for the initial estimate of the PPI and any PPI true-up should be derived from DEP's IRP, production cost model, and cost inputs that generated the avoided capacity and avoided energy credits approved in the Sub 148 Order. In addition, the Commission is similarly persuaded that if DEP and the Public Staff had achieved a meeting of the minds on simply using the avoided costs adopted in the Sub 148 Order and subsequent avoided cost proceedings, then they would have simply stated that in Paragraph 70A. They did not do so.

In this case, the Company's and the Public Staff's evidence relating to the Sub 1145 Agreement is substantially the same as the evidence presented in Sub 1130. Witness Duff testified at length about the intent of the parties to eliminate the triggers and to align the source of the avoided capacity and avoided capacity costs. There is no evidence in the record in this proceeding that the Sub 1145 Agreement was meant to alter the source or manner in which the avoided capacity costs are to be derived for the purpose of calculating cost-effectiveness and incentives associated with DSM/EE programs. In addition, the Commission generally agrees with the Company that evaluating the contributions that DSM/EE measures make to a utility avoiding future

[8] Similarly, the language of Paragraph 19 of DEC's cost recovery mechanism is the same in all material respects to the language of Paragraph 18 of the DEP Mechanism, and the language of Paragraph 23A of the DEC Mechanism is identical to the language of Paragraph 22A of the DEP Mechanism.

capacity needs to determine cost-effectiveness is inherently different than the evaluation undertaken to determine the capacity costs avoided through the purchase of the electric output from a QF.

In sum, the avoided capacity cost issue posed in this case is identical to the issue in the DEC case, and the same reasoning applies. The Public Staff can point to no distinguishing factors that dictate a different result in this case compared to Sub 1164. As discussed above, the language of the relevant paragraphs of the DEP and DEC cost recovery mechanisms are substantively identical, and the Sub 1145 Agreement and Sub 1130 Agreement are identical in all material respects (aside from the amount of the Vintage 2018 PPI adjustment).

The Commission, therefore, declines to accept the Public Staff's downward adjustment to the Vintage 2019 PPI, and, instead, accepts the cost-effectiveness calculations performed by the Company for purposes of the DSM/EE rider at issue in this proceeding, and approves the Company's calculation of the DSM/EE rates for Vintage 2019, as reflected in the supplemental testimony and exhibits of DEP witness Miller.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 15-21

The evidence for these findings of fact can be found in the testimony and exhibits of DEP witnesses Miller and Evans and the testimony and exhibits of Public Staff witness Maness.

In her direct testimony and exhibits, DEP witness Miller calculated proposed North Carolina retail NLR in the amount of $40,178,116 and a PPI in the amount of $21,846,452 for the EMF component of the total DSM/EE rider, and North Carolina retail NLR of $32,348,40 and a PPI of $25,997,556 for the forward-looking, or prospective component of the total rider. Company witness Miller indicated that as a result of additional analysis performed by DEP and discussions with the Public Staff, the Company adjusted its NLR and PPI amounts in the Supplemental Filing. The supplemental exhibits of witness Miller included in the Supplemental Filing indicated that the EMF NLR and PPI amounts were adjusted to $40,144,647 and $21,798,731, respectively, and the prospective NLR estimate was adjusted to $31,947,155.

In her exhibits filed as part of the Supplemental Filing, DEP witness Miller calculated DEP’s total North Carolina retail adjusted test period costs and utility incentives, consisting of its amortized DSM/EE O&M costs, capital costs, taxes, amortized incremental A&G costs, carrying charges, NLR, and PPI to be $168,007,613. Witness Miller’s testimony and exhibits also indicated that the amount of test period DSM/EE rider revenues and miscellaneous adjustments to take into consideration in determining the test period DSM/EE under- or over-recovery is $157,320,600. Therefore, the aggregate DSM/EE under-recovery recommended by DEP for purposes of this proceeding is $10,687,013, as reflected in the Supplemental Filing.

Witness Miller also calculated DEP’s estimate of its North Carolina retail DSM/EE program rate period amounts, consisting of its amortized O&M costs, depreciation, capital costs, taxes, amortized incremental A&G costs, carrying charges, NLR, and PPI, as $175,770,263.

According to the revised exhibits of DEP witness Miller as filed in the Supplemental Filing, after assignment or allocation to customer classes in accordance with N.C. Gen. Stat. § 62-133.9, Commission Rule R8-69, and the Commission orders in

Docket No. E-2, Sub 931, the revenue requirements for each class, excluding NCRF, are as follows:

DSM/EE PROSPECTIVE COMPONENT:

Residential	$100,657,479
General Service EE	68,669,252
General Service DSM	6,086,071
Lighting	357,461
Total	$175,770,263

DSM/EE EMF:

Residential	$ 494,880
General Service EE	11,979,271
General Service DSM	(1,790,030)
Lighting	2,892
Total	$10,687,013

Witness Miller's exhibits also set forth the North Carolina retail class level kWh sales that DEP believes are appropriate and reasonable for use in determining the DSM/EE and DSM/EE EMF billing factors in this proceeding. She adjusted the kWh sales to exclude estimated sales to customers who have opted out of participation in DEP's DSM/EE programs. The adjusted sales amounts are as follows: Residential class – 15,740,238,953 kWh; General Service EE class – 9,852,771,378 kWh; General Service DSM class – 9,737,467,991; and Lighting class – 361,265,217 kWh.

According to her revised exhibits filed as part of the Supplemental Filing, witness Miller calculated the DSM/EE billing factors without NCRF as follows:

DSM/EE PROSPECTIVE BILLING FACTORS (cents/kWh):

Residential	0.640
General Service EE	0.697
General Service DSM	0.063
Lighting	0.099

DSM/EE EMF BILLING FACTORS (cents/kWh):

Residential	0.003
General Service EE	0.122
General Service DSM	(0.018)
Lighting	0.001

Including the NCRF, the factors calculated by witness Miller are as follows:

DSM/EE PROSPECTIVE BILLING FACTORS (cents/kWh):

Residential	0.641
General Service EE	0.698
General Service DSM	0.063
Lighting	0.099

DSM/EE EMF BILLING FACTORS (cents/kWh):

Residential	0.003
General Service EE	0.122
General Service DSM	(0.018)
Lighting	0.001

Public Staff witness Maness indicated that the focus of the Public Staff's investigation of DEP's filing in this proceeding was whether the proposed DSM/EE rider was calculated in accordance with the Mechanism and otherwise adhered to sound ratemaking concepts and principles. (Tr. at 190.) The Public Staff's investigation included a review of the Company's filing and relevant prior Commission proceedings and orders, and workpapers and source documentation used by the Company to develop the proposed billing rates (including the selection and review of a sample of source documentation for test period costs included by the Company for recovery). (*Id*. at 190-191.)

With the exception of the items discussed below, witness Maness testified that he believes that the Company has calculated its proposed prospective DSM/EE and DSM/EE

EMF billing factors in a manner consistent with N.C. Gen. Stat. § 62-133.9, Commission Rule R8-69, and the Mechanism. (*Id*. at 192.)

Avoided Costs to be Used in the Determination of the PPI

As discussed above, witness Maness recommended that for as long as the Sub 148 avoided cost rates remain in effect, the Company should assign a capacity cost value of zero to all kW savings occurring before year 2022. (*Id*. at 192-195.) In his supplemental testimony, witness Maness clarified that the rate period 2019 revenue requirement impact of the Public Staff's recommended adjustment to reduce the avoided costs used in the determination of the PPI to reflect a value of zero is a reduction of $488,550. (*See id*. at 208-209.) The Company opposed the Public Staff's avoided cost methodology and the resulting adjustment in the rebuttal testimony of witness Duff.

For the reasons set forth in the Evidence and Conclusions for Finding of Fact No. 14, the Commission finds that the reduction to the Company's PPI recommended by witness Maness as a result of the Public Staff's position on avoided costs is inappropriate.

Recommended Termination of Residential Smart $aver EE Program

As discussed above, Public Staff witness Williamson recommended that the Company's Residential Smart $aver EE Program be terminated as of the end of 2018. Witness Maness therefore concluded that all Vintage 2019 program costs, NLR, and PPI associated with this program should be removed from the Company's billing factors. The rate period 2019 revenue requirement impact of the Public Staff's recommended adjustment to terminate the Residential Smart $aver EE Program is a reduction $512,494. (*See id*. at 208; *see also* Maness Ex. 2.) The Company opposed the Public Staff's recommendation to terminate the Residential Smart $aver EE Program and the resulting adjustment in the rebuttal testimony of witness Evans.

Because the Commission does not agree that the Residential Smart $aver Program should be terminated, as set forth in the Evidence and Conclusions for Finding of Fact No. 7, the Commission finds that the adjustments recommended by witness Maness relating to the Residential Smart $aver Program are inappropriate.

<u>Cut-Off of NLR to Reflect Outcome of General Rate Case</u>

Paragraph 58 of the Mechanism provides that:

> Notwithstanding the allowance of 36 months' Net Lost Revenues associated with eligible kWh sales reductions, the kWh sales reductions that result from measurement units installed shall cease being eligible for use in calculating Net Lost Revenues as of the effective date of (a) a Commission-approved alternative recovery mechanism that accounts for the eligible Net Lost Revenues associated with eligible kWh sales reductions, or (b) <u>the implementation of new rates approved by the Commission in a general rate case or comparable proceeding to the extent the rates set in the general rate case or comparable proceeding are set to explicitly or implicitly recover the Net Lost Revenues associated with those kWh sales reductions</u>. [Emphasis added].

Witness Maness noted in his testimony that although the test period in the Company's most recent general rates case in Docket No. E-2, Sub 1142 ("Sub 1142") was January 1, 2016 through December 31, 2016, the Agreement and Stipulation of Partial Settlement agreed to between the Public Staff and the Company in that proceeding included updated revenues that reflected changes in the number of customers and, for the residential class, changes in weather-normalized usage per customer through October 31, 2017. (Tr. at 195-196.)

Witness Maness testified that in its initial filing in this proceeding, the Company cut off NLR as of March 16, 2018 effective date of the general rate increase approved in Sub 1142 associated with DSM/EE measures installed through December 31, 2016 (the end of the nominal Sub 1142 test year). (*Id*. at 196.) However, the Company did not further reduce NLR to reflect the update adjustment made in Sub 1142 to capture changes in residential per customer usage through October 31, 2017. (*Id*.) He indicated that the Company agreed to make an adjustment to remove from residential NLR the impacts of the measures installed/implemented through October 31, 2017. (*Id*.) In the course of calculating this adjustment, the Company determined that it initially overstated the amount of residential and non-residential NLR related to 2016 that should be removed. (*Id*.) He noted that the Company's calculations indicate that the net of the two corrections for Vintage 2019 is a reduction in North Carolina retail NLR of approximately $308,000. (*Id*. at 196-197.) Witness Maness stated that once the Public Staff has reviewed the Company's Supplemental Filing incorporating these adjustments, it will inform the Commission as to whether it believes this adjustment has been made correctly. (*Id*. at 197.)

In her supplemental testimony, witness Miller testified that the Public Staff and the Company discussed the methodology that should be used to incorporate these revenue adjustments from the Sub 1142 rate case into the Company's DSM/EE rider filing. (*Id*. at 36.) Based on these discussions, she stated that the Company will do the following:

a. For residential customers, the Company will extend the rate case test period to October 31, 2017 as the customer growth adjustment used in the rate case also included updated actual kWh sales through that time period; and

b. For non-residential customers, the Company will continue to utilize the rate case test period January 1, 2016 through December 31, 2016, as no adjustments were made to incorporate actual kWh sales past that date. (*Id*. at 36-37.)

In addition, she indicated that the following modification will be made to calculate how much lost revenue is included in kWh sales for the test period. (*Id*. at 37.) She explained that since the twelve-month rate case test period uses actual kWh sales, and participation in EE measures occurs throughout the year, in any given twelve-month period, a full year of lost revenues are not captured in test period kWh sales, as all measures were not in place at the beginning of the test period. (*Id*.) The Company believes it is appropriate to quantify the actual incremental savings by month during that twelve-month rate case test period to calculate the amount of lost revenues that is truly being reflected in the new base rates that will be recovered from customers. (*Id*.) She testified that the difference between the annualized amount of energy savings and the actual amount of energy savings should be recovered through the Company's DSM/EE rider. (*Id*.; *see also* Supplemental Miller Exhibit 7.) The final result of the adjustment for the 2019 rate period is a reduction in NLR requested for residential customers in the amount of ($1,669,505) and an increase in NLR requested for non-residential customers in the amount of $1,361,119. (Tr. at 37-38.)

In his supplemental testimony, witness Maness indicated that the Public Staff believes that this adjustment is appropriate for purposes of this proceeding. (*See id*. at 209.)

Other Adjustments to Rate Calculations

In her Supplemental Testimony, witness Miller testified that during the course of the Company's review of its DSM/EE filing in this docket, DEP discovered that, although the EM&V results received in 2017 for the EnergyWise for Business Program had been appropriately applied prospectively, these results had not been included in calculation of the filed EMF rate. (*Id*. at 35.) Accordingly, in its Supplemental Filing, the Company updated Vintages 2016 and Vintage 2017 to reflect the revised kW savings included in the EnergyWise for Business EM&V report, which results in a reduction of PPI for non-residential customers in the amount of ($8,468) for Vintage 2016 and a reduction in PPI for non-residential customers in the amount of ($47,721) for Vintage 2017. (*Id*.)

Witness Miller also stated that during the analysis to determine the appropriate Vintage 2017 lost revenues for non-residential customers, the Company found that there were certain non-residential customers in the lighting program whose benefits were inadvertently calculated using the residential lost revenue rate. (*Id*. at 38.) In the Supplemental Filing, the Company made an adjustment that corrects that error. (*Id*.) According to witness Miller, the impact on NLR for Vintage 2017 non-residential EE Lighting is ($33,469) for Vintage 2017 and ($93,299) for Vintage 2019. (*Id*.)

In his supplemental testimony, witness Maness indicated that the Public Staff is of the opinion that these adjustments are reasonable for purposes of this proceeding. (*Id*. at 209.)

Witness Maness concluded that other than these issues, the Public Staff found no errors or other issues necessitating an adjustment to DEP's proposed billing factors. (*Id*. at 199.) As discussed above, Public Staff witness Williamson filed testimony in this proceeding discussing several EM&V-related topics and issues related to the Company's filing. Aside from the items discussed above, none of these topics and issues necessitates an adjustment to the Company's billing factor calculations. (*Id*.) Finally, witness Maness testified that the Public Staff's review of the Company's 2017 DSM/EE program costs is nearing completion. (*Id*. at 209.) He stated that when it is complete, the Public Staff will file the results with the Commission. (*Id*.) As of the date of the filing of witness Maness's supplemental testimony, the Public Staff had found no exception. (*Id*.)

As stated above, the two adjustments recommended by the Public Staff, but opposed by the Company (relating to the avoided costs to be used in the determination of the PPI and the termination of the Residential Smart $aver EE Program), are rejected by the Commission. With respect to DEP's proposed adjustments reflected in the Supplemental Filing, the Commission notes that no party opposed such recovery, and the Public Staff has agreed that they are reasonable for purposes of this proceeding. The Commission finds that such proposed recovery is consistent with the Commission's orders in Docket Nos. E-2, Sub 931 and Sub 1145, and that NLR and PPI are appropriate for recovery in this proceeding, with the prospective rate period costs subject to further review in DEP's future annual DSM/EE rider proceedings. The Commission concludes that DEP has complied with N.C. Gen. Stat. § 62-133.9, Commission Rule R8-69, and the Commission's orders in Docket Nos. E-2, Sub 931 and Sub 1145, with regard to calculating costs and utility incentives for the test and rate periods at issue in this proceeding.

Therefore, the Commission concludes that for purposes of the DSM/EE EMF billing rates to be set in this proceeding, DEP's reasonable and prudent North Carolina retail test period costs and incentives, consisting of its amortized DSM/EE O&M costs, capital costs, taxes, amortized incremental A&G costs, carrying charges, NLR, and PPI, are $168,007,613. The reasonable and appropriate amount of test period DSM/EE rider revenues and adjustments to take into consideration in determining the test year and prospective period DSM/EE under- or over-recovery is $157,320,600. Therefore, the aggregate DSM/EE under-recovery for purposes of this proceeding is $10,687,013.

For purposes of the DSM/EE rider to be set in this proceeding, and subject to review in DEP's future DSM/EE rider proceedings, the Commission concludes that DEP's reasonable and appropriate estimate of its North Carolina retail DSM/EE program rate period amounts, consisting of its amortized O&M costs, capital costs, taxes, amortized incremental A&G costs, carrying charges, NLR, and PPI, after incorporation of the adjustments reflected in the Company's Supplemental Filing, is $175,770,263, and this is the appropriate amount to use to develop the DSM/EE revenue requirement.

With regard to the revenue requirements per class, the Commission concludes that after assignment or allocation to customer classes in accordance with N.C. Gen. Stat. § 62-133.9, Commission Rule R8-69, and the orders in Docket No. E-2, Sub 931, the revenue requirements for each class, excluding NCRF, are as follows:

DSM/EE PROSPECTIVE COMPONENT:

Residential	$100,657,479
General Service EE	68,669,252
General Service DSM	6,086,071
Lighting	357,461
Total	$175,770,263

DSM/EE EMF:

Residential	$ 494,880
General Service EE	11,979,271
General Service DSM	(1,790,030)
Lighting	2,892
Total	$10,687,013

Furthermore, the Commission finds that the appropriate and reasonable North Carolina retail class level kWh sales for use in determining the DSM/EE and DSM/EE EMF billing factors in this proceeding are as follows: Residential class – 15,740,238,953; General Service class EE – 9,852,771,378; General Service class DSM – 9,737,467,991; and Lighting class – 361,265,217.

Based on the testimony and exhibits of witnesses Miller and Evans, the testimony and exhibits of witness Maness, and the entire record in this proceeding, the Commission finds and concludes that the forward-looking DSM/EE rates as proposed by DEP in the Supplemental Filing to be charged during the rate period for the Residential, General Service, and Lighting rate schedules are appropriate. The Commission further concludes that the DSM/EE EMF billing factors as proposed by DEP in the Supplemental Filing are appropriate.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 22-23

The evidence for these findings of fact can be found in the testimony of NC Justice Center, et al. witness Neme, Public Staff witness Williamson, and DEP witness Evans.

Company witness Evans noted that Vintage 2017 of the Company's DSM and EE programs produced over 416 million kWh of energy savings and over 450 MW of capacity savings, which produced net present value of avoided cost savings of close to $287 million. (Tr. at 63.)

Witness Evans testified that opt-outs by qualifying industrial and commercial customers have had a significant impact on the Company's overall non-residential participation and the associated impacts. (*Id*. at 68.) For Vintage 2017, 4,165 eligible customer accounts opted out of participating in DEP's non-residential portfolio of EE programs, and 4,099 eligible customer accounts opted out of participating in the Company's non-residential DSM programs. (*Id*.) Witness Evans stated that to reduce opt-outs, the Company continues to evaluate and revise its non-residential portfolio of programs to accommodate new technologies, eliminate product gaps, remove barriers to participation, and make its programs more attractive to opt-out eligible customers. (*Id*. at 68-69.) It also continues to leverage its Large Account Management Team to make sure customers are informed about product offerings. (*Id*. at 69.)

NC Justice Center, et al. witness Neme testified that, in just the three years from 2015 through 2017, DEP's efficiency programs have saved enough energy at the time of system peak to eliminate the need for the equivalent of approximately two and half natural gas peaker plants. (*Id*. at 118.) He also commended the Company for including a wide range of efficiency measures and programs in its DSM/EE portfolio, including "some national state-of-the art program design features." (*Id*.)

Witness Neme also noted that DEP's 2019 projected energy savings are 0.84%, which he indicated is below the one percent annual energy savings target contained in the settlement of the then-proposed merger of Duke Energy and Progress Energy ("Merger Settlement").[9] (*Id*. at 119.) However, it is unclear why witness Neme references the Merger Settlement with respect to the Company's 2019 estimate – as his testimony states, the Merger Settlement is only applicable to the period 2014 through 2018.[10] (*See id*.)

In his testimony, witness Neme also made several recommendations related to DSM/EE portfolio design, cost-effectiveness analysis, and EM&V. He emphasized that the complicated issues that he raises in his testimony would probably be best addressed, at least initially, through in-depth discussions between the utilities and other parties. (*Id*. at 122.) Thus, he recommended that the Commission should refer those issues to the DEP/DEC Collaborative, with a requirement that DEP report back on decisions in its 2019 DSM/EE rider proceeding. (*Id*.) In particular, he recommended that DEP should leverage its Collaborative to discuss: (a) ways to improve participation in the Company's Residential Smart $aver EE Program, such as establishing a midstream channel for promoting measures, increasing incentives, and enhancing marketing; (b) greater

[9] The Merger Settlement was approved by the Public Service Commission of South Carolina in Docket No. 2011-158-E. (Tr. at 119.)

[10] In any event, the annual savings targets contained in the Merger Settlement are aspirational, not mandatory. *See Order Approving DSM/EE Rider and Requiring Filing of Proposed Customer Notice*, Docket No. E-7, Sub 1105, pp. 28-29 (Aug. 27, 2015). As the Commission noted in the referenced order (as well as several other orders, including the Sub 1145 Order), to the extent that non-residential customers opt out of the Company's programs and implement their own DSM/EE programs, that does not count toward achievement of the aspirational targets. Thus, while the retail electricity sales that the 1% goal is based upon include sales to customers who have opted out of paying the DSM/EE rider, the level of savings the Company is able to achieve is negatively impacted by the ability of certain non-residential customers to opt out of the DSM/EE rider. *See id*.

promotion of whole-building retrofits, with an initial focus on targeting low-income communities; (c) building on DEP's recent successes in promoting measures in the midstream channel of its Non-Residential Prescriptive Rebate measure; (d) the potential to reduce the number of customers who opt out by educating customers who are eligible to opt out on available programs and/or improving program design to make programs more attractive to these customers; (e) the value of a Technical Reference Manual ("TRM"); (f) the propriety of assuming a one-year life for savings from the MyHER; (g) the impact of EISA on the Company's savings assumptions for residential light bulbs; and (h) the appropriateness of including non-electric benefits in cost-effectiveness analyses. (*Id*. at 122-150.) In addition, he suggested that the Collaborative explore program options for decreasing emphasis on short-lived savings, increasing investment in longer-lived measures, filling the "savings gap" that will be created by the elimination of most residential-lighting savings potential in 2020, and increasing program offerings to low-income communities. (*Id*. at 170.) He noted that analysis and consideration of his program ideas will likely require more than a quarterly Collaborative meeting. (*Id*. at 171.)

Public Staff witness Williamson also discussed his concerns regarding the fact that the EE lighting market is being transformed and that non-specialty LED lighting will likely become the baseline standard for general service bulb technologies by January 2020, thereby decreasing savings from EE lighting programs. (*Id*. at 235.) He indicated that it appears that the lighting market may be close to adopting EE lighting technologies as baseline and that further incentives for certain EE lighting measures for certain customers may not be necessary after January 1, 2020. (*Id*. at 235-237.) Witness

Williamson recommended that the Company include in it 2019 rider filing its plans to for general service lighting measures in all of its EE programs that include lighting measures. (*Id*. at 237.)

Witness Williamson also testified that the Company was in the process of installing Advanced Metering Infrastructure ("AMI") meters and new customer information systems, and there may be some redundancy in the information available through these new systems and the information provided through the MyHER Program. (*Id*. at 238.) He stated that the EM&V for the MyHER Program will need to clearly isolate any savings associated with enhanced access to customer data provided through AMI and customer information systems from the impacts solely attributable to the customized suggestions for the home provided by the MyHER Program. (*Id*. at 238-239.)

In his rebuttal testimony, DEP witness Evans testified that given that the updated customer information system and billing system will not be in service for several years, he believes that witness Williamson's observations relating to potential overlap between AMI/customer information system and the MyHER Program are premature. (*Id*. at 79.) Nevertheless, witness Evans indicated that the Company will work with the Public Staff to evaluate the MyHER Program's energy savings, recognizing the impacts of AMI and the updated customer information system. (*Id*.)

In response to witness Williamson's comments regarding the impact of EISA on the Company's EE lighting programs, witness Evans stated that the Company is amenable to discussing its plans for EE programs that include general use lighting measures in its 2019 DSM/EE rider filing. (*Id*. at 78.)

Witness Evans testified that while the Company does not necessarily agree with all of the recommendations included in witness Neme's testimony, it does agree that the Company's Collaborative meetings are the appropriate forum to discuss his program ideas. (*Id*. at 86.) Witness Evans indicated that given the commonality between DEC's and DEP's programs, a combined DEC/DEP Collaborative would be preferable. (*Id*. at 87.) He also agreed with witness Neme's assessment that quarterly meetings would be insufficient to adequately address the issues raised in his testimony, and recommended that the Collaborative meetings be expanded to every two months, as was approved in the Sub 1164 Order. (*Id*.)

The Commission believes that the Collaborative is the appropriate forum for consideration of the issues raised by witness Neme as outlined herein. The Collaborative should also consider the issues raised by Public Staff witness Williamson regarding the MyHER program and the impact of upcoming lighting standards. The Commission agrees that given the overlap between DEC's and DEP's programs, as well as the stakeholders who participate in each utility's Collaborative, a combined Collaborative is appropriate and should meet every other month as suggested by witness Evans.

IT IS, THEREFORE, ORDERED as follows:

1. That the appropriate DSM/EE EMF billing factors, excluding NCRF, for the Residential, General Service, and Lighting rate classes are: 0.003 cents per kWh for the Residential class; 0.122 cents per kWh for the EE component of General Service classes; (0.018) cents per kWh for the DSM component of General Service classes; and 0.001 cents per kWh for the Lighting class. These DSM/EE EMF billing factors do not change when the NCRF is included.

2. That the appropriate forward-looking DSM/EE rates to be charged by DEP during the rate period for the Residential, General Service, and Lighting rate classes (excluding NCRF) are: 0.640 cents per kWh for the Residential class; 0.697 cents per kWh for the EE component of General Service classes; 0.063 cents per kWh for the DSM component of General Service classes; and 0.099 cents per kWh for the Lighting class. The appropriate forward-looking DSM/EE rates to be charged by DEP during the rate period, including NCRF, are increments of: 0.641 cents per kWh for the Residential class; 0.698 cents per kWh for the EE component of the General Service classes; 0.063 cents per kWh for the DSM component of the General Service classes; and 0.099 cents per kWh for the Lighting class.

3. That the appropriate total DSM/EE annual riders including the DSM/EE rate and the DSM/EE EMF rate (including NCRF) for the Residential, General Service, and Lighting rate classes are increments of 0.644 cents per kWh for the Residential class, 0.820 cents per kWh for the EE portion of the General Service classes, 0.045 cents per kWh for the DSM portion of the General Service classes, and 0.100 cents per kWh for the Lighting class.

4. That DEP shall file appropriate rate schedules and riders with the Commission in order to implement these adjustments as soon as practicable. Such rates are to be effective for service rendered on or after January 1, 2019.

5. That DEP shall work with the Public Staff to prepare a joint proposed Notice to Customers giving notice of rate changes ordered by the Commission herein, and DEP shall file such proposed notice for Commission approval as soon as practicable.

6. The Company shall propose modifications to the Residential Smart $aver EE Program no later than December 31, 2018, with the goal of restoring the TRC score to 1.00 or greater, and the Company shall include a discussion of impact of these modifications and any other actions it has taken to improve cost-effectiveness in next year's DSM/EE rider proceeding.

7. That in its next rider application, DEP shall address the continuing cost-effectiveness of the Non-Residential Smart $aver Performance Incentive Program and if it is not cost-effective, provide details of plans to modify or close the program.

8. That in its next rider application, DEP shall address the continuing cost-effectiveness of the MyHER Program and if it is not cost-effective, provide details of plans to modify or close the program.

9. That the results of the EM&V report for the MyHER Program (Evans Exhibit I) are accepted conditionally for purposes of this proceeding. The Public Staff may continue to review this report and offer further recommendations for the Company's consideration in the next DSM/EE rider proceeding.

10. That the Company should incorporate the recommendation made by Public Staff witness Williamson that the program evaluator for the Company's EE Lighting Program should (a) include the basis for the selected weighting methodology (weightings based on bulb sales, measure savings, or other metric) when assessing program savings, and (b) indicate what other weighting methodologies were considered and why they were rejected, and why the selected methodology is preferable, in future EM&V reports for the EE Lighting Program.

11. That DEP shall leverage its Collaborative to discuss the EM&V issues and program design issues raised in the testimony of NC Justice Center, et al. witness Neme as discussed herein, as well as the issues raised by Public Staff witness Williamson regarding the MyHER program and the impact of upcoming lighting standards. The results of these discussions shall be reported to the Commission in the Company's 2019 DSM/EE rider filing.

12. Beginning in 2019, the combined DEC/DEP Collaborative shall meet every other month.

ISSUED BY ORDER OF THE COMMISSION.

This the ___ day of __________, 2018.

NORTH CAROLINA UTILITIES COMMISSION

Chief Clerk

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of Duke Energy Progress, LLC's Proposed Order, in Docket No. E-2, Sub 1174, has been served by electronic mail (e-mail), hand delivery or by depositing a copy in the United States Mail, first class postage prepaid, properly addressed to parties of record.

This, the 18th day of October 2018.

Electronically signed
s/ Molly McIntosh Jagannathan

____

Molly McIntosh Jagannathan
Troutman Sanders LLP
301 S. College Street, Suite 3400
Charlotte, NC 28202
Telephone: (704) 998-4074
molly.jagannathan@troutmansanders.com
North Carolina State Bar No. 36931

ATTORNEY FOR DUKE ENERGY
PROGRESS, LLC