

1 PLACE: Dobbs Building, Raleigh, North Carolina
2 DATE: Monday, September 9, 2019
3 TIME: 2:00 p.m. - 2:06 p.m.
4 DOCKET NO: E-2, Sub 1205
5 BEFORE: Commissioner Daniel G. Clodfelter, Presiding
6 Chair Charlotte A. Mitchell
7 Commissioner ToNola D. Brown-Bland
8 Commissioner Lyons Gray
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IN THE MATTER OF:

12 Application of Duke Energy Progress, LLC,
13 for Approval of Renewable Energy and Energy Efficiency
14 Portfolio Standard Cost Recovery Rider Pursuant to
15 N.C.G.S. § 62-133.8 and NCUC Rule R8-67
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1 A P P E A R A N C E S:

2 FOR DUKE ENERGY PROGRESS, LLC:

3 Robert W. Kaylor, Esq.

4 Law Office of Robert W. Kaylor, P.A.

5 353 E. Six Forks Road, Suite 260

6 Raleigh, North Carolina 27609

7

8 FOR CAROLINA UTILITY CUSTOMERS ASSOCIATION, INC.:

9 Robert F. Page, Esq.

10 Crisp & Page, PLLC

11 4010 Barrett Drive, Suite 205

12 Raleigh, North Carolina 27609

13

14 FOR NORTH CAROLINA SUSTAINABLE ENERGY ASSOCIATION:

15 Benjamin Smith, Esq.

16 Regulatory Counsel

17 4600 Six Forks Road, Suite 300

18 Raleigh, North Carolina 27609

19

20 FOR THE USING AND CONSUMING PUBLIC:

21 Heather Fennell, Esq.

22 North Carolina Utilities Commission

23 4326 Mail Service Center

24 Raleigh, North Carolina 27699-4300

NORTH CAROLINA UTILITIES COMMISSION

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E X H I B I T S

Identified / Admitted

Application of	
Duke Energy Progress, LLC.....	--/9
*Payne Exhibits 1 - 18.....	9/9
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*Confidential filed under seal

P R O C E E D I N G S

1
2 COMMISSIONER CLODFELTER: Let's come to
3 order in Docket Number E-2, Sub 1205. I'm
4 Commissioner Dan Clodfelter and I've been assigned to
5 preside over this proceeding. With me today are Chair
6 Mitchell and Commissioners Brown-Bland and Gray.

7 We're calling for hearing Docket E-2, Sub
8 1205, which is In the Matter of Application of Duke
9 Energy Progress, LLC, for Approval of Renewable Energy
10 and Energy Efficiency Portfolio Standard Cost Recovery
11 Rider pursuant to NC General Statute § 62-133.8 and
12 Commission Rule R8-67.

13 In compliance with the requirements of the
14 State Government Ethics Act, I remind all Commission
15 members of our duty to avoid conflicts of interest and
16 inquire whether any member of the Commission has a
17 known conflict of interest in this docket?

18 (No response)

19 Madam Reporter, let the record reflect that
20 no Commissioner has identified any conflicts in this
21 matter.

22 In addition to the Applicant, Petitions to
23 Intervene have been filed and granted for the Carolina
24 Utility Customers Association and for the North

1 Carolina Sustainable Energy Association and the
2 participation by the Utilities Commission - Public
3 Staff is recognized pursuant to Statute and Commission
4 Rule R8-67(c).

5 Let me open first by calling on counsel for
6 the parties and the intervenors to make their
7 appearances for the record, beginning with the
8 Applicant.

9 MR. KAYLOR: Thank you, Commissioner.
10 Robert Kaylor appearing on behalf of Duke Energy
11 Progress.

12 MR. PAGE: Robert Page representing Carolina
13 Utility Customers Association.

14 MS. FENNELL: Heather Fennell, Public Staff,
15 on behalf of the Using and Consuming Public.

16 COMMISSIONER CLODFELTER: Okay. Thank you.
17 I think that's all of the intervenors. Anyone
18 appearing on behalf of NCSEA?

19 (No response)

20 All right. On June 11, 2019, Duke Energy
21 Progress filed the Application for approval of
22 Renewable Energy and Energy Efficiency Portfolio
23 Standard Cost Recovery Rider, that is, the REEEPSCRR
24 for short - there's no way to make it short - and its

1 2018 REPS Compliance Report pursuant to Commission
2 Rule R8-67.

3 And on June 21st, 2019, the Commission
4 issued its Procedural Order scheduling the hearing for
5 this time and place and establishing discovery
6 guidelines, deadlines for testimony, and requirements
7 for public notice.

8 At this time I would inquire of counsel for
9 the parties, have all counsel had adequate opportunity
10 to examine the Clerk's docket and to satisfy
11 themselves that the filings of record with the Clerk
12 are accurate, that they are complete, and that there
13 are no items improperly filed in this docket?

14 MR. KAYLOR: Yes, for Duke Energy Progress.

15 MS. FENNEL: Yes, on behalf of the Public
16 Staff.

17 MR. PAGE: We have no objections to what's
18 in the Clerk's record and believe it to be accurate.

19 COMMISSIONER CLODFELTER: Thank you. Then
20 the Court will take judicial notice -- the Commission
21 will take judicial notice of the matters of record in
22 the Clerk's docket. With respect to the prefiled
23 testimony and the affidavits filed with the Clerk, is
24 there any witness whose testimony or affidavit needs

1 to be corrected or supplemented?

2 MR. KAYLOR: No.

3 MS. FENNELL: No.

4 MR. PAGE: We don't have a witness.

5 COMMISSIONER CLODFELTER: You don't have any
6 testimony; that's correct.

7 Are counsel satisfied that all necessary and
8 appropriate confidentiality designations have been
9 made with respect to the prefiled testimony, the
10 affidavits and the supporting documentary exhibits?

11 MR. KAYLOR: Yes, for Duke Energy Progress.

12 MS. FENNELL: Yes, for the Public Staff.

13 COMMISSIONER CLODFELTER: All right. I will
14 hear you on any objection, but unless there is some
15 objection then the Commission will admit into the
16 record, the evidentiary record, the Application by
17 Duke Energy Progress and the 2018 REPS Compliance
18 Report; the written direct testimony and exhibits of
19 Travis Payne and Veronica Williams, that's direct
20 testimony and exhibits; the confidential supplemental
21 testimony and revised exhibits of Travis Payne
22 consisting of four pages of supplemental testimony,
23 and a Revised Confidential Exhibit 2; and the
24 confidential supplemental testimony of Veronica

1 Williams, five pages, and Revised Confidential
2 Exhibits 1 through 3 (sic) and 4. We'd also admit
3 into the evidentiary record the additional
4 supplemental testimony of Veronica Williams, that
5 includes four pages and the Second Revised Exhibit 4,
6 and the rebuttal testimony of Travis Payne. And we
7 will admit into the evidentiary record the affidavits
8 of Evan Lawrence and Michelle Boswell, each of them
9 having Appendix A.

10 Confidential designations as filed with the
11 Clerk will be preserved.

12 Does any party wish to object to the
13 admission of any of those items into the record?

14 MR. KAYLOR: (Shakes head no).

15 MS. FENNEL: (Shakes head no).

16 COMMISSIONER CLODFELTER: If not, they are
17 received the same as if the witnesses were here
18 testifying, and all documentary exhibits are also
19 received.

20 (WHEREUPON, Duke Energy Progress,
21 LLC, Application is admitted into
22 evidence.)

23 (WHEREUPON, Payne Exhibits 1 - 18
24 are marked for identification as

1 prefiled and received into
2 evidence. Confidential filed
3 under seal.)

4 (WHEREUPON, the prefiled direct
5 testimony of TRAVIS E. PAYNE is
6 copied into the record as if given
7 orally from the stand.)
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BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-2, SUB 1205

In the Matter of)
)
 Application of Duke Energy Progress, LLC)
 for Approval of Renewable Energy and)
 Energy Efficiency Portfolio Standard (REPS))
 Compliance Report and Cost Recovery Rider)
 Pursuant to N.C. Gen. Stat. 62-133.8 and)
 Commission Rule R8-67)

**DIRECT TESTIMONY OF
TRAVIS E. PAYNE**

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Travis E. Payne, and my business address is 410 South
3 Wilmington Street, Raleigh, North Carolina.

4 **Q. PLEASE STATE YOUR POSITION WITH DUKE ENERGY AND**
5 **DESCRIBE YOUR CURRENT RESPONSIBILITIES.**

6 A. In my capacity as Business Development Manager III, I am responsible for
7 the origination and execution of wholesale and renewable energy
8 compliance transactions for Duke Energy Carolinas, LLC (“Duke Energy
9 Carolinas” or “DEC”), Duke Energy Progress, LLC (“Duke Energy
10 Progress,” “DEP” or “the Company”) and other Duke Energy Corporation
11 (“Duke Energy”) jurisdictions as the need arises. My responsibilities
12 include projects related to compliance with the renewable energy portfolio
13 standard requirements and renewable generation coordination for Duke
14 Energy’s Wholesale customers.

15 **Q. PLEASE BRIEFLY SUMMARIZE YOUR EDUCATIONAL**
16 **BACKGROUND.**

17 A. I received a Bachelor of Science degree in Financial Management from the
18 University of North Carolina at Charlotte and a Masters of Business
19 Administration from the University of Florida.

20 **Q. PLEASE DESCRIBE YOUR BUSINESS BACKGROUND AND**
21 **EXPERIENCE.**

22 A. I joined Progress Energy, Inc. in 2007, where I held positions in the Fuels
23 and System Operations department. Following the merger of Progress

1 Energy, Inc. with Duke Energy Corporation, I worked in the same
2 organization as a Natural Gas Trader until September of 2013, when I
3 moved to the Renewables and Distributed Energy Technology organization.
4 Since the move, I have held roles as a Renewable Analytics Manager, the
5 Renewable Compliance Manager and my current position as a Business
6 Development Manager III.

7 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE NORTH**
8 **CAROLINA UTILITIES COMMISSION?**

9 A. Yes, I most recently provided testimony in Docket No. E-7, Sub 1131 on
10 DEC's 2016 REPS compliance report and application for approval of its
11 REPS cost recovery rider.

12 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

13 A. The purpose of my testimony is to describe Duke Energy Progress'
14 activities and the costs it has incurred, or will incur, in support of
15 compliance with North Carolina's Renewable Energy and Energy
16 Efficiency Portfolio Standard ("REPS") under N.C. Gen. Stat. ("G.S.") §
17 62-133.8 during the twelve months beginning on April 1, 2018 and ending
18 on March 31, 2019 ("Test Period"), as well as during the twelve months
19 beginning on December 1, 2019 and ending on November 30, 2020
20 ("Billing Period").

21 **Q. PLEASE DESCRIBE THE EXHIBITS TO YOUR TESTIMONY.**

22 A. My testimony includes eighteen exhibits: Payne Confidential Exhibit No. 1
23 is the Company's 2018 REPS Compliance Report, and Payne Confidential

1 Exhibit No. 2 provides actual and forecasted REPS compliance costs, by
2 resource, that the Company has incurred during the Test Period and projects
3 to incur during the Billing Period in support of compliance with REPS.
4 Payne Confidential Exhibit No. 3 is a worksheet detailing the other
5 incremental costs included in this filing, listing separately labor and non-
6 labor costs, as directed by the Commission in its January 17, 2017 *Order*
7 *Approving REPS and REPS EMF Rider and REPS Compliance Report*
8 (“2017 Order”) in Docket No. E-2, Sub 1109 . This exhibit does not include
9 specific costs related to interconnection activities; they have been omitted
10 per the 2017 Order. Payne Exhibit Nos. 4-18 are the results of studies the
11 costs of which the Company is recovering via the REPS Rider.

12 **Q. WERE THESE EXHIBITS PREPARED BY YOU OR AT YOUR**
13 **DIRECTION AND UNDER YOUR SUPERVISION?**

14 A. Payne Confidential Exhibit Nos. 1-3 were prepared by me or under my
15 supervision. Payne Exhibit Nos. 4-18 include the results of studies not
16 prepared under my supervision. However, in my role at Duke Energy, I am
17 familiar with the studies.

18 **Compliance with REPS Requirements**

19 **Q. WHAT ARE DUKE ENERGY PROGRESS’ REPS**
20 **REQUIREMENTS UNDER G.S. § 62-133.8?**

1 A. Pursuant to G.S. § 62-133.8,¹ as an electric power supplier, Duke Energy
2 Progress is required to comply with the overall REPS requirement (“Total
3 Requirement”) by submitting for retirement a total volume of renewable
4 energy certificates (“RECs”) equivalent to the following percentages of its
5 North Carolina retail sales in the prior year:

- 6 ▪ Beginning in 2012, three percent (3%);
- 7 ▪ In 2015, six percent (6%);
- 8 ▪ In 2018, ten percent (10%); and
- 9 ▪ In 2021 and thereafter, twelve point five percent (12.5%).

10 Furthermore, each electric power supplier must comply with the
11 requirements of G.S. §§ 62-133.8 (d), (e), and (f) (individually referred to
12 as the “Solar Set-Aside,” “Swine Waste Set-Aside,” and “Poultry Waste
13 Set-Aside,” respectively). That is, within the Total Requirement described
14 above, each electric power supplier is to ensure that specific quantities of
15 qualifying solar RECs, swine waste RECs, and poultry waste RECs are also
16 submitted for retirement. The Company generally refers to its Total
17 Requirement net of the three set-asides as its “General Requirement.”

18 Specifically, each electric power supplier is to comply with the Solar
19 Set-Aside by submitting for retirement a volume of qualifying solar RECs
20 equivalent to the following percentages of its North Carolina retail sales in
21 the prior year:

¹ In its *Order Clarifying Electric Power Suppliers’ Annual REPS Requirements*, Docket No. E-100, Sub 113 (November 26, 2008), the Commission clarified that the calculation of these requirements for each year shall be based upon the electric utility’s North Carolina retail sales for the prior year.

- 1 ▪ Beginning in 2010, two-hundredths of one percent (0.02%);
- 2 ▪ In 2012, seven-hundredths of one percent (0.07%);
- 3 ▪ In 2015, fourteen-hundredths of one percent (0.14%); and
- 4 ▪ In 2018 and thereafter, two-tenths of one percent (0.2%).

5 Each electric power supplier is also to comply with the Swine Waste
6 Set-Aside by submitting for retirement a volume of qualifying swine waste
7 RECs equivalent to its pro-rata share of total retail electric power sold in
8 North Carolina multiplied by the statewide, aggregate swine waste set-aside
9 requirement.² Duke Energy Progress' Swine Waste Set-Aside
10 requirements, as modified by the Commission,³ are as follows:

- 11 ▪ In 2018, its pro-rata share of two-hundredths of one percent (0.02%)
12 of the total retail electric power sold in North Carolina in the year
13 prior;
- 14 ▪ In 2019, its pro-rata share of seven-hundredths of one percent
15 (0.07%) of the total retail electric power sold in North Carolina in
16 the year prior;

² In its *Order on Pro Rata Allocation of Aggregate Swine and Poultry Waste Set-Aside Requirements and Motion for Clarification* in Docket No. E-100, Sub 113 (March 31, 2010), the Commission approved the electric power suppliers' proposed pro-rata allocation of the statewide aggregate swine and poultry waste set-aside requirements, such that the aggregate requirements will be allocated among the electric power suppliers based on the ratio of each electric power supplier's prior year retail sales to the total statewide retail sales.

³ In its *Order Modifying the Swine and Poultry Waste Set-Aside Requirements And Providing Other Relief* (October 8, 2018), Docket No. E-100, Sub 113, the Commission modified the 2018 Swine Waste Set-Aside Requirement for electric public utilities to 0.02% and delayed by one year the scheduled increases to the requirement. The Commission also modified the 2018 Poultry Waste Set-Aside requirement to 300,000 MWh, and delayed by one year the scheduled increases in the requirement.

1 counts for two poultry waste and one general REC, to meet its Total
2 Requirement of 3,682,990 RECs. Within this total, the Company submitted
3 for retirement 73,660 RECs to meet the Solar Set-Aside requirement,
4 66,987 RECs, along with 8,789 SB 886 RECs (which count as 17,578
5 Poultry Waste Set-Aside RECs), to meet the Poultry Waste Set-Aside
6 requirement of 84,565 RECS, and 7,366 RECs to meet the Swine Waste
7 Set-Aside Requirement. During the prospective Billing Period, which
8 spans two calendar years, with different requirements in each year, the
9 Company's estimated requirements are as follows⁴:

10 In 2019, the Company estimates that it will be required to submit for
11 retirement 3,868,727 RECs to meet its Total Requirement. Within this total,
12 the Company is also required to retire the following: 77,375 solar RECs,
13 27,082 swine waste RECs and 197,319 poultry waste RECs.

14 In 2020, the Company estimates that it will be required to submit for
15 retirement 3,796,477 RECs to meet its Total Requirement. Within this total,
16 the Company estimates that it will be required to retire approximately
17 75,930 solar RECs, 26,576 swine waste RECs and 253,695 poultry waste
18 RECs.

19 **Q. HAS THE COMPANY COMPLIED WITH ITS GENERAL**
20 **REQUIREMENT FOR 2018?**

21 A. Yes, the Company has met its 2018 General Requirement of 3,517,399
22 RECs. Specifically, the RECs to be used for 2018 compliance have been

⁴ The Company's projected requirements are based upon retail sales estimates and will be subject to change based upon actual prior year North Carolina retail sales data.

1 transferred from the North Carolina Renewable Energy Tracking System
2 (“NC-RETS”) Progress Energy Electric Power Supplier account to the
3 Progress Energy Compliance Sub-Account. Upon completion of this
4 regulatory proceeding, the Commission will finalize retirement of the
5 RECs.

6 **Q. WILL THE COMPANY COMPLY WITH ITS GENERAL REPS**
7 **REQUIREMENT IN 2019?**

8 A. Yes, the Company is well positioned to comply with its General REPS
9 Requirements in 2019.

10 **Q. WHAT ACTIONS HAS THE COMPANY TAKEN DURING THE**
11 **TEST PERIOD TO SATISFY ITS CURRENT AND FUTURE REPS**
12 **REQUIREMENTS?**

13 A. During the Test Period, Duke Energy Progress has continued to produce
14 and procure RECs to satisfy its REPS requirements. Specifically, the
15 Company has taken the following actions: (1) executed and continued
16 negotiations for additional REC purchase agreements with renewable
17 facilities; (2) solicited renewable energy proposals of various types; (3)
18 continued operations of its solar facilities; (4) continued to fully utilize
19 energy savings generated by its energy efficiency programs, that can be
20 counted towards the Company’s REPS requirement; (5) performed research
21 studies, both directly and through strategic partnerships, to enhance the
22 Company’s ability to comply with its future REPS requirements; (6)
23 obtained approval from the Commission on a method by which to calculate

1 the RECs generated from net metering facilities and track these RECs for
2 use in meeting the Company's REPS requirements; and (7) issued a Request
3 for Proposals as part of the Competitive Procurement of Renewable Energy
4 ("CPRE") Program of North Carolina House Bill 589 ("NC HB 589"), the
5 RECs from which will be used to meet the Company's future REPS
6 requirements.

7 **Q. IS THE COMPANY ABLE TO USE RECS GENERATED FROM**
8 **NET METERING FACILITIES TO SATISFY ITS FUTURE REPS**
9 **REQUIREMENTS?**

10 A. Yes. Under the current Net Metering for Renewable Energy Facilities Rider
11 offered by DEP (Rider NM-4B), a customer receiving electric service under
12 a schedule other than a time-of-use schedule with demand rates ("NMNTD
13 customer") shall provide any RECs to DEP at no cost. Per the Commission's
14 June 5, 2018 *Order Approving Rider and Granting Waiver Request*
15 ("NMNTD Order") in Docket Nos. E-2, Sub 1106 and E-7, Sub 1113, for
16 NMNTD customers, DEP may use the PVWatts™ Solar Calculator
17 developed by the National Renewable Energy Laboratory for estimating the
18 generation from NMNTD customers' solar facilities, as permitted by
19 Commission Rule R8-67(g)(2). Commission Rule R8-67(g)(2) allows the
20 use of a scalable conversion factor for estimating annual generation from
21 program participants. DEP shall then report the total amount of electricity
22 produced by facilities under the Rider directly into NC-RETS in a separately
23 identified generation project. DEP has complied with these requirements

1 and reported generation from NMNTD customers to NC-RETS. The RECs
2 from these facilities are currently in DEP's REC inventory and available for
3 use for future compliance requirements.

4 **Q. ARE THERE OTHER COMPLIANCE REQUIREMENTS IN THE**
5 **NMNTD ORDER WITH WHICH DEP MUST COMPLY?**

6 A. Yes. The NMNTD Order also requires that DEP shall provide NC-RETS on
7 a monthly basis with a list of participating customers, including location
8 and the kW capacity of their installations, to be made available on the NC-
9 RETS website. DEP has complied, and continues to comply, with this
10 requirement. In addition, the NMNTD Order requires that for two years,
11 DEP shall verify through site visits to a statistically significant number of
12 participating residences that the solar installations covered by this Rider
13 continue to be operating, and shall include the findings of its site visits in
14 its annual REPS compliance filing. DEP hired a third-party contractor to
15 perform the required site visits which were completed in late May 2019.
16 Therefore, the results of these visits will be reported in the Company's 2019
17 compliance filing to be made in 2020.

18 **Q. HOW WILL THE CPRE PROGRAM OF NC HB 589 IMPACT DEP'S**
19 **COMPLIANCE WITH ITS GENERAL REQUIREMENT?**

20 A. Under G.S. § 62-110.8(a), DEC and DEP (the "Companies") are responsible
21 for procuring renewable energy and capacity through a competitive
22 procurement program with the purpose of adding renewable energy to the
23 state's generation portfolio in a manner that allows DEC and DEP to

1 continue to reliably and cost-effectively serve their customers' future
2 energy needs. To meet the CPRE Program requirements, the Companies
3 must issue requests for proposals to procure energy and capacity from
4 renewable energy facilities in the aggregate amount of 2,660 MW (subject
5 to adjustment in certain circumstances) reasonably allocated over a term of
6 45 months beginning on February 21, 2018, when the Commission
7 approved the CPRE Program.

8 Renewable energy facilities eligible to participate in the CPRE
9 solicitation(s) include those facilities that use renewable energy resources
10 identified in G.S. § 62-133.8(a)(8), the REPS statute. The renewable energy
11 facilities to be developed or acquired by the Companies or procured from a
12 third party through a power purchase agreement under the CPRE Program,
13 must also deliver to the Companies the environmental and renewable
14 attributes, or RECs, associated with the power. The Company's annual
15 CPRE Program Plan, filed on September 1, 2018 in Docket No. E-100, Sub
16 157, includes a planned allocation of ~1,460 to ~1,960 MWs between the
17 DEC and DEP service territories, as well as a planned timeline for each
18 solicitation. Additional details regarding DEP's CPRE compliance
19 activities for the current Test Period are being filed concurrently with this
20 REPS filing and may be reviewed in Docket No. E-2, Sub 1208. DEP plans
21 to use the RECs acquired through the CPRE RFP solicitations for its future
22 REPS compliance requirements and has therefore included the planned MW
23 allocation and timeline in its REPS compliance planning process. In the

1 Public Staff's May 20, 2019 testimony in the DEC REPS cost recovery
2 proceeding, Docket No. E-7, Sub 1191, witness Evan D. Lawrence stated
3 that CPRE costs cannot be recovered through REPS proceedings. In rebuttal
4 testimony filed on May 30, 2019, I disagreed with that position but stated
5 that the issue did not need to be decided at that time as there were no CPRE
6 costs in the DEC filing. Similarly in this proceeding, and as noted in Megan
7 W. Jennings' direct testimony in last year's annual REPS cost recovery
8 proceeding in Docket No. E-2, Sub 1175, the Company intends to recover
9 the reasonable and prudent costs incurred to implement the CPRE Program
10 through the CPRE Rider as contemplated under Commission Rule R8-71(j).
11 However, absent recovery of any such costs to implement the CPRE
12 program in future CPRE proceedings, the Company would propose to
13 recover the costs in a future REPS proceeding as an incremental cost of
14 procuring RECs to meet its REPS compliance requirement. There are no
15 CPRE program implementation costs in this current REPS proceeding, so
16 the issue again requires no immediate decision to complete the review and
17 approval of the currently proposed REPS rider.

18 **Q. HAS THE COMPANY COMPLIED WITH ITS SOLAR SET-ASIDE**
19 **REQUIREMENT FOR 2018?**

20 A. Yes, the Company has met the 2018 Solar Set-Aside requirement of 73,660
21 solar RECs. Pursuant to the NC-RETS Operating Procedures, the Company
22 has submitted for retirement 73,660 solar RECs. Specifically, the RECs to
23 be used for 2018 compliance have been transferred from the NC-RETS

1 Progress Energy Electric Power Supplier account to the Progress Energy
2 Compliance Sub-Account. Upon completion of this regulatory proceeding,
3 the Commission will finalize retirement of the RECs.

4 **Q. WILL THE COMPANY COMPLY WITH ITS SOLAR SET-ASIDE**
5 **REQUIREMENT IN 2019?**

6 A. Yes, the Company is well positioned to comply with its Solar Set-Aside
7 requirement in 2019.

8 **Q. PLEASE PROVIDE AN UPDATE ON THE COMPANY'S EFFORTS**
9 **TO COMPLY WITH ITS SOLAR SET-ASIDE REQUIREMENT.**

10 A. The Company is well positioned to comply with its Solar Set-Aside
11 Requirement in 2019 through a diverse and balanced portfolio of solar
12 resources. The Company's efforts to comply with the Solar Set-Aside
13 Requirement include REC generation and procurement from solar
14 renewable energy facilities.

15 The Company continues to operate the following Company-owned
16 solar facilities, the RECs from which are used for REPS compliance:

- 17 • Camp Lejeune Solar Facility – 13MW, located in Onslow County;
- 18 • Warsaw Solar Facility – 65MW, located in Duplin County;
- 19 • Fayetteville Solar Facility – 23MW, located in Bladen County; and
- 20 • Elm City Solar Facility – 40MW, located in Wilson County.

21 **Q. HAS THE COMPANY COMPLIED WITH ITS POULTRY WASTE**
22 **SET-ASIDE REQUIREMENT FOR 2018?**

1 A. Yes, the Company has met the 2018 Poultry Waste requirement of 84,565
2 RECs. Pursuant to NC-RETS Operating Procedures, the Company has
3 submitted for retirement 66,987 poultry RECs and 8,789 SB 886 RECs
4 (which count as 17,578 Poultry Waste Set-Aside RECs). Accordingly, the
5 Company has submitted the equivalent of 84,565 poultry RECs for
6 compliance. Specifically, the RECs to be used for 2018 compliance have
7 been transferred from the NC-RETS Progress Energy Electric Power
8 Supplier account to the Progress Energy Compliance Sub-Account. Upon
9 completion of this regulatory proceeding, the Commission will finalize
10 retirement of the RECs.

11 **Q. WILL THE COMPANY COMPLY WITH ITS POULTRY WASTE**
12 **SET-ASIDE REQUIREMENT IN 2019?**

13 A. The Company is in a position to comply with its poultry waste set-aside
14 requirement in 2019, though future compliance is dependent on the
15 performance of poultry waste-to-energy developers on current contracts and
16 new facilities that are scheduled to come online, including one that is
17 expected to come online in 2019. Ramping up to meet the increased
18 compliance targets for 2019 - 2020 has been problematic because suppliers
19 have either delayed projects or lowered the volume of RECs to be produced,
20 and other facilities have undergone extended outages to perform repairs.

21 **Q. WHAT ACTIONS HAS THE COMPANY TAKEN DURING THE**
22 **TEST PERIOD TO PROCURE OR DEVELOP POULTRY WASTE-**

1 **TO-ENERGY RESOURCES TO SATISFY ITS POULTRY WASTE**
2 **SET-ASIDE REQUIREMENTS?**

3 A. In the Test Period, the Company (1) continued direct negotiations for
4 additional supplies of both in-state and out-of-state resources with multiple
5 counterparties; (2) secured contracts for additional poultry waste-to-energy
6 resources; (3) worked diligently to understand the technological, permitting,
7 and operational risks associated with various methods of producing
8 qualifying poultry RECs to aid developers in overcoming those risks; when
9 those risks could not be overcome, the Company worked with developers
10 via contract amendments to adjust for more realistic outcomes; (4) explored
11 leveraging current biomass contracts by working with developers to add
12 poultry waste to their fuel mix; (5) explored adding thermal capabilities to
13 current poultry sites to bolster REC production; (6) explored poultry-
14 derived directed biogas at facilities located in North Carolina and directed
15 such biogas to combined cycle plants for combustion and electric
16 generation; (7) utilized the Company's REC trader to search the broker
17 market for out-of-state poultry RECs available in the market; and (8)
18 participated in the North Carolina Energy Policy Council Biogas Working
19 Group. Additional information on the Company's compliance with the
20 Poultry Waste Set-Aside requirement can be found in the Company's Joint
21 Semiannual Progress Report, filed on June 3, 2019 in Docket No. E-100,
22 Sub 113A.

1 The Company remains committed to satisfying its statutory
2 requirements for the Poultry Waste Set-Aside and will continue to
3 reasonably and prudently pursue procurement of these resources.

4 **Q. HAS THE COMPANY COMPLIED WITH ITS SWINE WASTE**
5 **SET-ASIDE REQUIREMENT FOR 2018?**

6 A. Yes. The Company has met the modified 2018 Swine Waste Set-Aside
7 Requirement of 0.02% or the equivalent of 7,366 swine RECs. Pursuant to
8 the NC-RETS Operating Procedures, the Company has submitted for
9 retirement 7,366 swine RECs. Specifically, the RECs to be used for 2018
10 compliance have been transferred from the NC-RETS Progress Energy
11 Electric Power Supplier account to the Progress Energy Compliance Sub-
12 Account. Upon completion of this regulatory proceeding, the Commission
13 will finalize retirement of the RECs.

14 **Q. WILL THE COMPANY COMPLY WITH ITS SWINE WASTE SET-**
15 **ASIDE REQUIREMENT IN 2019?**

16 A. Current projections indicate that DEP will not be able to comply with the
17 swine waste set-aside in 2019, as existing contracts have not been able to
18 reach contracted levels of production, and new contracts have not come
19 online in the timeframe originally planned. Several swine projects are
20 scheduled to come online over the next few years. The ability of these
21 facilities to come online and produce their full contracted RECs will
22 determine the levels of compliance that DEP is able to meet in the near term.

23 The Company understands that current swine waste-to-energy

1 projects have encountered difficulties in achieving the full REC output of
2 their contracts due to issues including local opposition to siting of the
3 facilities, the inability to secure firm and reliable sources of swine waste
4 feedstock from waste producers in North Carolina, difficulties securing
5 project financing and technological challenges encountered when ramping
6 up production. In addition, after terminating two contracts for swine waste
7 RECs in 2017 due to failure to perform, the Company was notified by
8 another project in January 2019 that the project will not be continuing due
9 to failure to operate.

10 **Q. WHAT ACTIONS HAS THE COMPANY TAKEN DURING THE**
11 **TEST PERIOD TO PROCURE OR DEVELOP SWINE WASTE-TO-**
12 **ENERGY RESOURCES TO MEET ITS SWINE WASTE SET-ASIDE**
13 **REQUIREMENTS?**

14 A. In the Test Period, the Company (1) continued direct negotiations for
15 additional supplies of both in-state and out-of-state resources; (2) secured
16 contracts for additional swine waste-to-energy resources; (3) worked
17 diligently to understand the technological, permitting, and operational risks
18 associated with various methods of producing qualifying swine waste RECs
19 to aid developers in overcoming those risks; when those risks could not be
20 overcome, the Company worked with developers via contract amendments
21 to adjust for outcomes that the developers believe are achievable based on
22 new experience; (4) explored and is engaging in modification of current
23 biomass and set-asides contracts by working with developers to add swine

1 waste to their fuel mix; (5) continued pursuit of swine-derived directed
2 biogas from North Carolina facilities; (6) utilized the Company's REC
3 trader to search the broker market for out-of-state swine RECs available in
4 the market; (7) participated in the North Carolina Energy Policy Council
5 Biogas Working Group; and (8) engaged the North Carolina Pork Council
6 ("NCPC") in a project evaluation collaboration effort that will allow the
7 Company and the NCPC to discuss project viability, as appropriate, with
8 respect to the Company's obligations to keep certain sensitive commercial
9 information confidential. Additional information on the Company's
10 compliance with the Swine Waste Set-Aside requirement can be found in
11 the Company's Joint Semiannual Progress Report, filed on June 3, 2019 in
12 Docket No. E-100, Sub 113A.

13 The Company remains committed to satisfying its statutory
14 requirements for the Swine Waste Set-Aside and will continue to reasonably
15 and prudently pursue procurement of these resources.

16 **Q. IS DUKE ENERGY PROGRESS CONTINUING TO EXECUTE**
17 **ADDITIONAL REC PURCHASE AGREEMENTS?**

18 A. Yes, the Company continues to execute additional REC purchase
19 agreements and maintains an open solicitation for proposals from
20 developers of renewable energy resources.

21 **Q. DID THE COMPANY SELL ANY RECS DURING THE TEST**
22 **PERIOD?**

23 A. No, it did not.

1 Costs of REPS Compliance

2 **Q. WHAT ARE THE COMPANY'S COSTS ASSOCIATED WITH REPS**
3 **COMPLIANCE DURING THIS TEST PERIOD AND THE**
4 **UPCOMING BILLING PERIOD?**

5 A. Duke Energy Progress' costs associated with REPS compliance are
6 reflected in Payne Confidential Exhibit No. 2 and are categorized by actual
7 costs incurred during the Test Period and projected costs for the Billing
8 Period.

9 **Q. IN ADDITION TO RENEWABLE ENERGY AND REC COSTS,**
10 **WHAT OTHER COSTS OF REPS COMPLIANCE DOES THE**
11 **COMPANY SEEK TO RECOVER IN THIS PROCEEDING?**

12 A. Payne Confidential Exhibit No. 2 identifies "Other Incremental Cost,"
13 "Solar Rebate Program Cost" and "Research Cost" that the Company has
14 incurred, and estimates it will incur, in association with REPS compliance.

15 Other Incremental Costs and Solar Rebate Program Costs

16 **Q. PLEASE EXPLAIN THE OTHER INCREMENTAL COSTS**
17 **INCLUDED FOR RECOVERY.**

18 A. Other Incremental Costs include labor costs associated with REPS
19 compliance activities and non-labor costs associated with administration of
20 REPS compliance. Among the non-labor costs associated with REPS
21 compliance are the Company's subscription to NC-RETS, and accounting,
22 and tracking tools related to RECs, reduced by agreed-upon liquidated
23 damages paid by sellers for failure to meet contractual milestones, and

1 amounts paid for administrative contractual amendments requested by
2 sellers.

3 **Q. PLEASE PROVIDE INFORMATION ON THE NC HB 589 SOLAR**
4 **REBATE PROGRAM.**

5 A. As required by G.S. § 62-155(f), DEP developed a Solar Rebate Program
6 offering reasonable incentives to residential and nonresidential customers
7 for the installation of small customer owned or leased solar energy facilities
8 participating in the Company's net metering tariff. The incentive is limited
9 to 10 kilowatts alternating current ("kW AC") for residential solar
10 installations and 100 kW AC for nonresidential solar installations. The
11 program incentive shall be limited to 10,000 kW of installed capacity
12 annually starting January 1, 2018 and continuing until December 31, 2022.

13 **Q. ARE COSTS RELATED TO THE NC HB 589 SOLAR REBATE**
14 **PROGRAM INCLUDED FOR RECOVERY IN THIS FILING?**

15 A. Yes. Pursuant to G.S. § 62-155(f), each public utility required to offer a
16 solar rebate program "shall be authorized to recover all reasonable and
17 prudent costs of incentives provided to customers and program
18 administrative costs by amortizing the total program incentives distributed
19 during a calendar year and administrative costs over a 20-year period,
20 including a return component adjusted for income taxes at the utility's
21 overall weighted average cost of capital established in its most recent
22 general rate case, which shall be included in the costs recoverable by the
23 public utility pursuant to G.S. § 62-133.8(h)." G.S. § 62-133.8(h) provides

1 for an electric power supplier's cost recovery and customer charges under
2 the REPS statute; NC HB 589 amended it by adding a provision to allow
3 for the recovery of incremental costs incurred to "provide incentives to
4 customers, including program costs, incurred pursuant to G.S. § 62-155(f)."
5 Therefore, DEP has included for recovery in this filing costs incurred during
6 the EMF period, and projected to be incurred in the Billing Period related
7 to the implementation of the NC HB 589 Solar Rebate Program. As detailed
8 on Payne Confidential Exhibit No. 3, these costs include the annual
9 amortization of incentives paid to customers and program administration
10 costs, which include labor, information technology and marketing costs.

11 **Q. PLEASE PROVIDE DETAIL ON THE NON-LABOR COSTS**
12 **ASSOCIATED WITH THE NC HB 589 SOLAR REBATE**
13 **PROGRAM.**

14 A. Non-labor costs associated with the NC HB 589 Solar Rebate Program
15 include the rebate incentives paid to customers, program marketing costs
16 and information technology costs for the automation of program
17 administrative tasks.

18 The NC HB 589 Solar Rebate Program launched on July 9, 2018.
19 On July 26, 2018, DEP filed a notice that the 2018 annual participation
20 limits for residential and non-residential customers under the Solar Rebate
21 Program, exclusive of the non-profit participation set-aside, had been
22 reached. Rebate payments were made to customers accepted into the
23 program, upon installation of their generating system. Beginning in 2019,

1 for a residential customer who obtains a rebate reservation prior to
2 installation, the installation must be completed no later than December 31
3 in the year in which the reservation was obtained. For a nonresidential
4 customer who obtains a rebate reservation prior to installation, the
5 installation must be completed no later than 365 days from the date of an
6 executed interconnection agreement. Therefore, rebate payments for the
7 2018 program year will continue into 2019, and the same principle will
8 apply for subsequent program years, with payments continuing into 2023
9 after the final program year of 2022. In accordance with the September 20,
10 2018 Order issued by the Commission in Docket Nos. E-2, Sub 1167, and
11 E-7, Sub 1166, after December 31, 2018, a reallocation was completed to
12 assign capacity and pay rebates to those defined as ‘Affected Customers’
13 within the Order. This resulted in an increase in rebate payments made at
14 the beginning of 2019. DEP filed a notice on January 4, 2019 for residential
15 customers and January 8, 2019 for non-residential customers, that the 2019
16 annual participation limits for residential and non-residential customers
17 under the Solar Rebate Program, exclusive of the non-profit participation
18 set-aside, had been reached.

19 **Q. PLEASE PROVIDE DETAIL ON THE INTERNAL LABOR COSTS**
20 **ASSOCIATED WITH THE NC HB 589 SOLAR REBATE**
21 **PROGRAM.**

22 A. The labor dollars related to the NC HB 589 Solar Rebate Program included
23 for recovery in this filing include projected costs for one Program Manager,

1 two Program Specialists, two complex billing staff, information technology,
2 and compliance, accounting and rates support. The Program Manager is
3 responsible for marketing, installer communications, reporting and
4 overseeing the Program Specialists, who are responsible for processing
5 applications, initiating incentive payments and handling customer inquiries.
6 In addition, incremental employees are needed in complex billing as the
7 number of net metering accounts has increased as a result of the NC HB 589
8 Solar Rebate Program. Information technology work is performed by both
9 internal employees and contractors and encompass implementation of an
10 electronic application process, including automation required to receive and
11 process solar rebate applications and payments. These employees and
12 contractors continue to provide support and enhancements to this platform
13 which ensures rebate applications are able to be accepted, tracked and
14 monitored. Compliance, accounting, and rates are responsible for ensuring
15 program costs incurred and included for recovery are valid and have
16 appropriate support, rebate payments made comply with the terms outlined
17 in the Solar Rebate Rider, and detail included in required website and
18 updates to the Commission is accurate.

19 **Q. PLEASE PROVIDE DETAIL ON THE INTERNAL LABOR COSTS**
20 **THAT ARE ASSOCIATED WITH REPS COMPLIANCE AND**
21 **SOLAR REBATE ACTIVITIES THAT ARE INCLUDED IN DEP'S**
22 **CURRENT APPLICATION FOR REPS COST RECOVERY.**

1 A. DEP charges only the incremental cost of REPS compliance and the NC HB
2 589 Solar Rebate Program to the REPS cost recovery rider. Consistent with
3 that policy and DEP's practices in previous applications for cost recovery
4 for REPS compliance, internal employees who work to comply with G.S. §
5 62-133.8 and G.S. § 62-155(f) charge only that portion of their labor to
6 REPS. The departments/functions that charged labor to REPS during the
7 Test Period are detailed in Payne Confidential Exhibit No. 3.

8 **Q. HOW DO EMPLOYEES CHARGE THEIR REPS-RELATED AND**
9 **NC HB 589 SOLAR REBATE PROGRAM-RELATED LABOR**
10 **COSTS TO REPS?**

11 A. Employees positively report their time, which means that each employee is
12 required to submit a timesheet every two weeks in DEP's time reporting
13 system. The hours reported for the period are split according to the
14 accounting entered in the time reporting system for that specific employee.
15 The division of hours is updated for the reporting period as necessary, as
16 the nature of the employee's work changes.

17 To educate employees to account for their time properly, DEP
18 annually provides instructions for charging time to REPS to affected
19 employees and the management of the employee groups performing REPS
20 work. Additionally, every year prior to filing for approval of the DEP REPS
21 Compliance Report and Cost-Recovery Rider, the labor hours charged are
22 carefully reviewed and confirmed.

1 **Q. ARE THERE ANY LABOR AND NON-LABOR**
2 **INTERCONNECTION-RELATED COSTS INCLUDED FOR**
3 **RECOVERY IN THIS FILING?**

4 A. No. As directed by the Commission in the *2015 DEP REPS Compliance*
5 *Order*, all internal interconnection-related labor costs, such as those related
6 to employees in the Distributed Energy Technology Standard PPAs and
7 Interconnection Team and the Renewables Service Center, contract labor
8 costs, such as those for temporary employees working on interconnection
9 information technology projects, and non-labor costs, such as PowerClerk
10 platform costs, have not been included for recovery in this filing.

11 **Research Costs**

12 With respect to Research and Development (“R&D”) activities during the
13 Test Period and projected for the Billing Period, the Company has incurred
14 or projects to incur costs associated with the support of various pilot projects
15 and studies related to distributed energy technology and the Company’s
16 REPS compliance.

17 **Q. THE COMMISSION’S *ORDER APPROVING REPS AND REPS EMF***
18 ***RIDERS AND 2012 REPS COMPLIANCE* REQUIRES DUKE**
19 **ENERGY PROGRESS TO FILE WITH ITS 2018 REPS RIDER**
20 **APPLICATION STUDY RESULTS FOR ANY STUDIES THE**
21 **COSTS OF WHICH IT HAS RECOVERED VIA THE REPS RIDER.**
22 **IS THE COMPANY SUPPLYING SUCH STUDIES IN THIS**
23 **FILING?**

1 A. Yes. The Company's R&D efforts are an integral part of its REPS
2 compliance efforts. The following summary outlines efforts undertaken by
3 the Company in the test period and specifies the availability of applicable
4 study results.

- 5 • CAPER, Smart Battery Gauge ("SBG") – In 2018, the Company
6 worked with North Carolina State University ("NC State") and
7 Clemson University, through CAPER, on a project to develop the
8 SBG and to validate the value proposition of the SBG by
9 demonstrating its ability to accurately estimate the State of Charge,
10 State of Health and the Remaining Useful Life in real-time and while
11 the energy storage device is in use. The results of this project can be
12 found in Payne Confidential Exhibit No. 4. This project is ongoing
13 and is estimated to be completed in 2019.
- 14 • Clemson University – Small DG Interface Testing – In 2018, the
15 Company engaged with the eGRID laboratory located at Clemson
16 University on a project to test and validate the function and
17 performance of the Company's small DG interface. A description of
18 the project background can be found in Payne Confidential Exhibit
19 No. 5.
- 20 • Coalition for Renewable Natural Gas – The Company joined the
21 Coalition for Renewable Natural Gas in 2017, and renewed its
22 membership in 2018, to add a valuable resource of knowledge and
23 public policy advocacy in this growing sector of potential animal

1 waste supply. The Coalition for Renewable Natural Gas provides its
2 members with exclusive whitepapers, support on model pipeline gas
3 specifications and access to other members for discussions on
4 current and future projects.

5 • DER Risks to Transformers and Transmission – In 2018, the
6 Company worked with ABB and Pike Engineering on a project to
7 evaluate the distribution energy resource interconnection impacts to
8 the Transmission to Distribution transformers and the transmission
9 system. The results of this project can be found in Payne
10 Confidential Exhibit No. 6. The report contains Critical Energy
11 Infrastructure Information as defined by the Federal Energy
12 Regulatory Commission. As such, Exhibit 6 should be treated as
13 strictly confidential.

14 • Eos Energy Storage Technology Development – The Company and
15 Eos Services started a collaborative technology development
16 program to validate, demonstrate, and quantify the benefits of an
17 Eos Aurora Battery System that is DC Coupled to a PV facility at
18 the McAlpine Creek Substation 50 kW Solar Facility. The expected
19 completion date of the project is in 2020.

20 • Electric Power Research Institute (“EPRI”) – In 2018, the Company
21 subscribed to the following EPRI programs, the costs of which were
22 recovered via the REPS rider: Program 174 – Integration of
23 Distributed Energy Resources. The Company participated in a

1 supplemental project under this program – “Evaluation of Inverter
2 On-Board Detection Methods to Prevent Unintended Islanding.”
3 EPRI designates such study results as proprietary or as trade secrets
4 and licenses such results to EPRI members, including Duke Energy
5 Progress. As such, the Company may not disclose the information
6 publicly. Non-members may access these studies for a fee.
7 Information regarding access to this information can be found at
8 <http://www.epri.com/Pages/Default.aspx>.

- 9 • ETO - Mitigation of Transformer High Inrush Current – In 2018, the
10 Company started working with multiple vendors on a project to test
11 and evaluate different options to mitigate the transformer high
12 inrush current. Transformers are very expensive components of the
13 electric power system. The transformers installed in the utility scale
14 solar generating facilities are experiencing high inrush current
15 during energization. Transformer inrush currents are short duration
16 currents that flow into the transformer primary every time the
17 transformer is energized. These currents are typically high
18 magnitude (up to 20 times the nominal current), harmonic currents
19 with some DC component. These high inrush currents can cause
20 numerous problems on the electrical system, such as breaker
21 tripping, voltage sags, voltage flicker, mechanical stress on the
22 transformer windings, oscillatory torque in motors and system
23 resonance. A detailed description of the project can be found in

- 1 Payne Confidential Exhibit No. 7. The expected completion date of
2 the project is by the end of 2019.
- 3 • NC State University’s Future Renewable Electric Energy Delivery
4 and Management (“FREEDM”) Systems Center – Duke Energy
5 supports NC State’s FREEDM Center through annual membership
6 dues. The FREEDM partnership provides Duke Energy with the
7 ability to influence and focus research on materials, technology, and
8 products that will enable the utility industry to transform the electric
9 grid into a two-way power flow system supporting distributed
10 generation.
 - 11 • Institute for Electrical and Electronics Engineers (“IEEE”) 1547
12 Conformity Assessment – The IEEE 1547 Conformity Assessment
13 Steering Committee has been working to develop industry standard
14 tools and methodologies to assure consistent and comprehensive
15 compliance prior to utility grid interconnection sign off. IEEE and
16 the Company share a common goal to accelerate and broaden
17 industry adoption through the development and publication of well-
18 designed and managed conformity assessment and certification
19 programs. This project was about establishment and execution of an
20 IEEE 1547 Commissioning Test demonstration for solar
21 installations within the eGRID laboratory located at Clemson
22 University. The project formally commissioned the operation of a
23 50kW inverter and established an operational test bed for more

- 1 advanced interconnection evaluation. The results of this project can
2 be found in Payne Confidential Exhibit No. 8.
- 3 • Marshall Solar Site Algorithm – In 2018, the Company continued to
4 work with the University of North Carolina at Charlotte (“UNCC”)
5 on a project to utilize the operational data to design and implement
6 an autonomous active and reactive power dispatch algorithm with
7 PV farms and/or Battery Energy Storage system on any feeder
8 considering DMS coordination. The work in 2018 was to develop a
9 battery degradation model that can be seamlessly integrated to a
10 stacked energy storage application controller. The methodology has
11 been tested on a specific battery type and compared with other
12 battery models. The Phase IV results of this project can be found in
13 Payne Confidential Exhibit No. 9. The Company is continuing to
14 support the next phase of this project, which will be completed in
15 the summer of 2019.
 - 16 • Mini-DVAR Project – In 2016, the Company started a project to
17 investigate a new technology manufactured by American
18 Superconductor Corporation which makes a device called Mini-
19 DVAR. This device can potentially be used for voltage
20 stability/VAR support for renewable energy applications such as
21 voltage compliance, grid reliability, efficiency, energy savings and
22 grid integration of distributed PV. The project also included
23 engineering design of a protection scheme with Schweitzer

1 Engineering Laboratories, and the procurement of switch gear from
2 ABB. In 2017, the Company completed installation and
3 commissioning of the mini-DVAR to verify it was fully functional.
4 This project continued in 2018 to collect operational data and to
5 analyze its application and benefit in Volt VAR Optimization of the
6 distribution system. The results of this project can be found in Payne
7 Confidential Exhibit Nos. 10-12.

8 • NC State University – ETO – Grid-forming Battery Energy Storage
9 System Characterization and Testing – Starting from late 2018, the
10 Company worked with NC State on a project to install and
11 commission a Battery Energy Storage System (“BESS”) and to
12 study the loading capabilities of the BESS operating in grid-forming
13 mode. A BESS may need to power up a microgrid after an outage,
14 thus supplying all the magnetizing currents to line-start machines as
15 well as isolation transformers in the microgrid. There is a need to
16 understand the capabilities of the state-of-the art BESS inverters to
17 support these loads. Though simulating such behavior is feasible,
18 experimental validation is required to guarantee that the system will
19 operate as expected, and the BESS inverter protection will not trip.
20 The expected completion date of the project is by the end of 2019.

21 • NC State University – Interactions of PV Installations with
22 Distribution Systems – Starting from late 2018, the Company
23 worked with NC State on a project to construct a testbed and

- 1 analysis framework for investigating how large PV penetration on a
2 feeder affects the operation of the distribution system. The expected
3 completion date of the project is by the end of 2019.
- 4 • PNNL – Dynamic Var Compensator (“DVC”) Pilot – In 2018, the
5 Company worked with One-Cycle Control, Inc. and Pacific
6 Northwest National Laboratory (“PNNL”) on a project, which is
7 part of DOE SunlAmp Contract: 0000-1714, to install and
8 commission two DVC devices in the Company’s distribution
9 system, and to evaluate its performance in mitigating the voltage
10 variability due to high penetration of distributed photovoltaic on a
11 distribution feeder. A detailed description of the project can be
12 found in Payne Confidential Exhibit Nos. 13-14.
 - 13 • Research Triangle Institute – Biogas Utilization in North Carolina –
14 In 2018, the Company began support of the Research Triangle
15 Institute project for the NC Energy Policy Council to determine the
16 potential bioenergy/biogas resources available in North Carolina,
17 and to identify the most beneficial and optimum utilization of
18 resources to maximize economic, environmental and societal
19 advantages. An overview of the project can be found in Payne
20 Exhibit No. 15.
 - 21 • Rocky Mountain Institute (“RMI”) – The Company participates in
22 eLab, a forum sponsored by RMI, composed of a number of North
23 Carolina and nationally based entities, and organized to overcome

1 barriers to economic deployment of distributed energy resources in
2 the U.S. electric sector. Specifically, the Company seeks to gauge
3 customer desires related to distributed resources and provide ideas
4 of potential long-term solutions for distributed energy resources and
5 microgrids. Please visit RMI's website at <http://www.rmi.org/elab>
6 for more information on eLab.

- 7 • Swine Extrusion/Poultry Mortality – The Animal and Poultry Waste
8 Management Center (“APWMC”) at NC State University – In
9 2018, the Company continued support of the various projects being
10 undertaken by the APWMC. This work is centered around drying
11 swine lagoon solids, bagged lagoon sludge and sludge mixed with
12 agricultural wastes at a farm-based level to create a higher MMBtu
13 fuel that can be safely and easily transported to a central plant for
14 combustion. A detailed description of the project along with future
15 testing plans can be found in Payne Confidential Exhibit No. 16.
- 16 • UNCC – Evaluation of DER Fault Scenarios and Mitigation
17 Techniques – In 2018, the Company worked with UNCC on a
18 project to evaluate behavior of inverter-based power sources during
19 fault conditions and make recommendations to enhance protection
20 algorithms to standard vendors of protection and control systems.
21 The results of this project can be found in Payne Confidential
22 Exhibit No. 17.

- 1 • UNCC – Hardware Cyber Security for DER Inverters – In 2018, the
2 Company worked with UNCC on a project to provide hardware
3 assurance in an affordable manner to transition a global supply chain
4 to producing solar inverters with trusted hardware for secure control
5 and communications. In this work, the Company and UNCC
6 investigated the enhancement of security of power grid converters
7 using reconfigurable architecture and hardware-based crypto
8 processors. The results of this project can be found in Payne
9 Confidential Exhibit No. 18.
- 10 • Alliance for Sustainable Energy - Solar Impact Analysis – In 2019,
11 the Company began initial work with the Alliance for Sustainable
12 Energy on a project that will analyze the impacts of integrating
13 significant amounts of new solar power into the Duke Energy power
14 system, quantify solar potential and identify likely integration
15 challenges or opportunities for other technologies. The project is
16 expected to have a second phase with deliverables later in 2019 and
17 into 2020.

18 **Q. ARE YOU SATISFIED THAT THE ACTUAL COSTS INCURRED**
19 **IN THE TEST PERIOD HAVE BEEN, AND THAT THE**
20 **PROJECTED COSTS OF THE BILLING PERIOD WILL BE,**
21 **PRUDENTLY INCURRED?**

22 A. Yes. Duke Energy Progress believes it has incurred and projects to incur
23 these costs associated with REPS compliance in a prudent manner. The

1 Company continues to exercise thorough and rigorous technical and
2 economic analysis to evaluate all options for compliance with its REPS
3 requirements. Duke Energy Progress has developed strong foundational
4 market knowledge related to renewable resources. The Company continues
5 to enhance and develop expertise in this field through the Company's
6 various solicitations for renewable energy and the operation of its
7 unsolicited bid process, its participation in industry research, and daily
8 interaction with developers of renewable energy facilities. As a result of
9 these efforts, the Company has been able to identify, procure, and develop
10 a diverse portfolio of renewable resources to meet its REPS requirements in
11 a prudent, reasonable and cost-effective manner.

12 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

13 **A. Yes.**

1 (WHEREUPON, Revised Payne Exhibit
2 2 is marked for identification as
3 prefiled and received into
4 evidence. Confidential filed
5 under seal.)

6 (WHEREUPON, the prefiled
7 supplemental testimony of TRAVIS
8 E. PAYNE is copied into the record
9 as if given orally from the
10 stand.)
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BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-2, SUB 1205

In the Matter of)
)
 Application of Duke Energy Progress, LLC)
 for Approval of Renewable Energy and)
 Energy Efficiency Portfolio Standard (REPS))
 Compliance Report and Cost Recovery Rider)
 Pursuant to N.C. Gen. Stat. 62-133.8 and)
 Commission Rule R8-67)

**SUPPLEMENTAL
 TESTIMONY OF TRAVIS E.
 PAYNE**

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Travis E. Payne, and my business address is 410 South
3 Wilmington Street, Raleigh, North Carolina.

4 **Q. DID YOU PREVIOUSLY FILE DIRECT TESTIMONY IN THIS**
5 **MATTER BEFORE THE NORTH CAROLINA UTILITIES**
6 **COMMISSION?**

7 A. Yes. I filed direct testimony on behalf of Duke Energy Progress, LLC in
8 this matter on June 11, 2019.

9 **Q. WHAT IS THE PURPOSE OF YOUR SUPPLEMENTAL**
10 **TESTIMONY?**

11 A. The purpose of my supplemental testimony is to update the North Carolina
12 Utilities Commission on information presented in the exhibits filed with my
13 direct testimony.

14 **Q. WHAT UPDATES NEED TO BE MADE TO THE EXHIBITS FILED**
15 **WITH YOUR DIRECT TESTIMONY?**

16 A. Renewable energy and renewable energy certificate (“REC”) actual cost
17 and quantity totals were inadvertently omitted in error from Line No. 236
18 on Confidential Payne Exhibit No. 2 filed with my direct testimony in this
19 docket. The result was an understatement of \$585,128 in incremental REPS
20 recovery cost for the April 1, 2018 through March 31, 2019 experience
21 modification factor (“EMF”) test period. There is no effect on quantities or
22 cost for the December 1, 2019 through November 30, 2020 estimated billing
23 period. Details for the cost and REC quantity amounts originally omitted

1 from Line No. 236 on Confidential Payne Exhibit No. 2 for the EMF period
2 are as follows: [BEGIN CONFIDENTIAL] [REDACTED]
3 [REDACTED]
4 [REDACTED]
5 [REDACTED]
6 ■ [END CONFIDENTIAL] Confidential Revised Payne Exhibit No. 2
7 filed with this supplemental testimony reflects corrections to amounts on
8 Line No. 236, and to the corresponding subtotals and totals shown on Line
9 Nos. 243, 245, 260, and 266. Also filed with this supplemental testimony
10 are Revised Page No. 5 of Payne Exhibit No. 1, the 2018 Compliance
11 Report. Tables in section Nos. IV and V are updated to incorporate the
12 corrections noted above.

13 The adjustments noted above are also identified in the supplemental
14 testimony of Veronica I. Williams and reflected in Revised Williams
15 Exhibit Nos. 1, 2, and 4, filed in this docket.

16 **Q. DOES THIS CONCLUDE YOUR SUPPLEMENTAL TESTIMONY?**

17 **A. Yes.**

IV. ACTUAL TOTAL AND INCREMENTAL COSTS INCURRED IN 2018

Actual costs incurred in 2018 for REPS compliance were comprised of the following cost of energy purchases and the purchase of various types of RECs and other reasonable and prudent costs incurred to meet the requirements of the statute.

2018 Actual Costs Incurred	Energy and REC Costs	Other	Total Costs
Total costs incurred	\$249,115,133	\$1,331,399	\$250,446,532
Avoided costs	\$216,029,531		\$216,029,531
Incremental costs	\$33,085,602	\$1,331,399	\$34,417,001

V. ACTUAL INCREMENTAL COSTS COMPARISON TO THE ANNUAL COST CAP

Account Type	Total 2017 Year-end number of Retail Accounts	Annual Per-Account Cost Cap	Total Annual Cost Cap – 2018 Compliance Year
Residential	1,204,664	\$27	\$32,525,928
General	196,549	\$150	\$29,482,350
Industrial	1,866	\$1,000	\$1,866,000
	Total Annual Cost Cap		\$63,874,278
	Actual Incremental Costs		\$34,417,001

VI. STATUS OF COMPLIANCE WITH REPS REQUIREMENTS

Pursuant to N.C. Gen. Stat. § 62-133.8(b) for Duke Energy Progress Retail customers, the REPS requirement for calendar year 2018 is set at 10% of 2017 North Carolina retail sales. In order to comply with the REPS obligation for Duke Energy Progress Retail customers, the Company submitted 3,665,412 RECs, which included 8,789 Senate Bill 886 (“SB886”) RECs, each of which counts for two poultry waste RECs and one general REC. Accordingly, the Company submitted the equivalent of 3,682,990 RECs for compliance, representing 10% of 2017 retail megawatt-hour sales of 36,829,899.

Pursuant to N.C. Gen. Stat. § 62-133.8(d), the REPS requirement for calendar year 2018 is at least 0.20% of the total electric power in kilowatt hours sold to retail electric customers in the prior calendar year in the State, or an equivalent amount of energy, shall be supplied by a combination of new solar electric facilities and new metered solar thermal energy facilities.

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(WHEREUPON, the prefiled rebuttal testimony of TRAVIS E. PAYNE is copied into the record as if given orally from the stand.)

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-2, SUB 1205

In the Matter of)
)
 Application of Duke Energy Progress, LLC)
 for Approval of Renewable Energy and)
 Energy Efficiency Portfolio Standard (REPS))
 Compliance Report and Cost Recovery Rider)
 Pursuant to N.C. Gen. Stat. 62-133.8 and)
 Commission Rule R8-67)

**REBUTTAL TESTIMONY
OF TRAVIS E. PAYNE**

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Travis E. Payne, and my business address is 410 South
3 Wilmington Street, Raleigh, North Carolina.

4 **Q. DID YOU PREVIOUSLY FILE DIRECT AND SUPPLEMENTAL**
5 **TESTIMONY IN THIS MATTER BEFORE THE NORTH**
6 **CAROLINA UTILITIES COMMISSION?**

7 A. Yes. I filed direct testimony on behalf of Duke Energy Progress, LLC
8 (“DEP” or “the Company”) in this matter on June 11, 2019 and
9 supplemental testimony on July 16, 2019.

10 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**

11 A. The purpose of my testimony is to comment on a portion of the affidavit of
12 Public Staff witness Evan D. Lawrence.

13 **Q. PLEASE COMMENT ON WITNESS LAWRENCE’S REQUEST ON**
14 **PAGE SIX OF HIS AFFIDAVIT REGARDING THE LEVEL OF**
15 **DETAIL PRESENTED ON THE COMPANY’S EXHIBITS.**

16 A. The Company agrees with witness Lawrence’s suggestion starting on page
17 6 of his affidavit wherein he recommends that the renewable energy
18 certificate (“REC”) purchases from REC suppliers with multiple REC
19 sources (i.e., thermal and general biomass), shown on Payne Confidential
20 Exhibit No. 2, be presented as separate line items in future proceedings. The
21 Company is not opposed to this recommendation and will file accordingly
22 in future proceedings.

1 **Q. DO YOU TAKE ISSUE WITH PORTIONS OF PUBLIC STAFF**
2 **WITNESS LAWRENCE’S AFFIDAVIT? AND IF YES, PLEASE**
3 **STATE YOUR DIFFERENCES.**

4 A. Yes, as set forth beginning on page 5 of his affidavit, I do disagree with
5 witness Lawrence’s testimony that Competitive Procurement of Renewable
6 Energy (“CPRE”) costs cannot be recovered through REPS proceedings.
7 However, the Commission concluded in its August 15, 2019 *Order*
8 *Approving REPS and REPS EMF Riders and 2018 Compliance Report*, in
9 the recent Duke Energy Carolinas, LLC (“DEC”) REPS rider proceeding in
10 Docket No. E-7, Sub 1191, “the issue of whether the inclusion of any CPRE
11 program implementation costs in the REPS rider is not ripe for
12 determination in this proceeding, because DEC has not sought to retire
13 RECs earned through the CPRE Program against its 2018 REPS compliance
14 requirements, nor sought to recover costs incurred to implement the CPRE
15 Program through the rider established in this proceeding.” DEP respectfully
16 submits that this conclusion also applies to the Company’s current REPS
17 proceeding, as no CPRE costs are included for recovery through the
18 proposed rider, and no RECs have yet been earned through the CPRE
19 Program nor retired for REPS compliance.

20 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

21 A. Yes.

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(WHEREUPON, Williams Exhibits 1 - 5 are marked for identification as prefiled and received into evidence. Confidential filed under seal.)

(WHEREUPON, the prefiled direct testimony of VERONICA I. WILLIAMS is copied into the record as if given orally from the stand.)

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-2, SUB 1205

In the Matter of)
)
 Application of Duke Energy Progress, LLC for)
 Approval of Renewable Energy and Energy)
 Efficiency Portfolio Standard (REPS))
 Compliance Report and Cost Recovery Rider)
 Pursuant to N.C. Gen. Stat. § 62-133.8 and)
 Commission Rule R8-67)
)
)
)

**DIRECT TESTIMONY
 OF VERONICA I.
 WILLIAMS**

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Veronica I. Williams, and my business address is 550 South Tryon
3 Street, Charlotte, North Carolina.

4 **Q. PLEASE STATE YOUR POSITION WITH DUKE ENERGY AND**
5 **DESCRIBE YOUR CURRENT RESPONSIBILITIES.**

6 A. In my capacity as Rates and Regulatory Strategy Manager, I am responsible
7 for providing regulatory support related to retail and wholesale rates, providing
8 guidance on Renewable Energy and Energy Efficiency Portfolio Standard
9 (“REPS”) compliance and cost recovery for Duke Energy Progress, LLC
10 (“Duke Energy Progress,” “DEP,” or the “Company”) and Duke Energy
11 Carolinas, LLC (“Duke Energy Carolinas” or “DEC”), and preparing and filing
12 testimony and exhibits in annual DEP and DEC REPS rider proceedings.

13 **Q. PLEASE BRIEFLY SUMMARIZE YOUR EDUCATIONAL**
14 **BACKGROUND, BUSINESS BACKGROUND AND PROFESSIONAL**
15 **AFFILIATIONS.**

16 A. I received a Bachelor of Science degree in Business from the University of
17 North Carolina at Charlotte. I am a certified public accountant licensed in the
18 state of North Carolina. I began my career with Duke Power Company (now
19 known as Duke Energy Carolinas) as an internal auditor and subsequently
20 worked in various departments in the finance organization. I joined the Rates
21 Department in 2001.

22 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE NORTH**
23 **CAROLINA UTILITIES COMMISSION?**

1 A. Yes. I most recently provided testimony in Docket No. E-7, Sub 1191 regarding
2 Duke Energy Carolinas' 2018 REPS compliance report and application for
3 approval of its REPS cost recovery rider, in Docket No. E-7, Sub 1181
4 regarding Duke Energy Carolinas' application to transfer certificates and
5 ownership interest in hydroelectric generating facilities, and in Docket No. E-
6 2, Sub 1175 regarding Duke Energy Progress' 2017 REPS compliance report
7 and application for approval of its REPS cost recovery rider.

8 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

9 A. The purpose of my testimony is to describe the calculation of and present the
10 support for the REPS rider proposed by Duke Energy Progress under N.C. Gen.
11 Stat. ("G.S.") § 62-133.8 and to present the information and data required by
12 Commission Rule R8-67 as set forth in Williams Exhibit Nos. 1 through 4. The
13 test period used in supplying this information and data is the twelve months
14 beginning on April 1, 2018 and ending on March 31, 2019 ("Test Period" or
15 "EMF Period"), and the billing period for the REPS rider requested in the
16 Company's application is the twelve months beginning on December 1, 2019
17 and ending on November 30, 2020 ("Billing Period").

18 **Q. PLEASE DESCRIBE THE EXHIBITS TO YOUR TESTIMONY.**

19 A. Williams Confidential Exhibit No. 1 ("Williams Exhibit No. 1") identifies the
20 total incremental REPS compliance costs for which the Company seeks
21 recovery from Duke Energy Progress North Carolina Retail ("NC Retail")
22 customers. Williams Confidential Exhibit No. 2 ("Williams Exhibit No. 2")
23 shows the allocation of the total REPS compliance costs, identified in Williams

1 Exhibit No. 1, to the Company's NC Retail customer classes for the Test Period.
2 Williams Confidential Exhibit No. 3 ("Williams Exhibit No. 3") shows the
3 allocation of the total expected REPS compliance costs, identified on Williams
4 Exhibit No. 1, to the Company's NC Retail customer classes for the Billing
5 Period. Williams Exhibit No. 4 shows the total REPS rider amounts proposed,
6 including the REPS Experience Modification Factor ("EMF"), by customer
7 class, compared to the cost cap for each customer class. Finally, Williams
8 Exhibit No. 5 is a worksheet detailing the Company's energy efficiency
9 certificate ("EEC") inventory balance as of December 31, 2018.

10 **Q. WERE THESE EXHIBITS PREPARED BY YOU OR AT YOUR**
11 **DIRECTION AND UNDER YOUR SUPERVISION?**

12 A. Yes.

13 **Q. WHAT COSTS ARE INCLUDED IN DUKE ENERGY PROGRESS'**
14 **PROPOSED REPS RIDER?**

15 A. The proposed REPS rider intends to recover Duke Energy Progress'
16 incremental costs of compliance with the renewable energy requirements
17 pursuant to G.S. § 62-133.8. The costs incurred by the Company to comply
18 with its REPS compliance requirements are described comprehensively in the
19 testimony of Company Witness Payne, and detailed in Payne Confidential
20 Exhibit Nos. 2 and 3, filed in this docket. The costs incurred during the Test
21 Period are presented in this filing to demonstrate their reasonableness and
22 prudence as provided in North Carolina Utilities Commission ("Commission")
23 Rule R8-67(e).

1 The rider includes the REPS EMF component to recover the difference
2 between the compliance costs incurred and revenues realized during the Test
3 Period. The proposed rider also includes a component to recover the costs
4 expected to be incurred for the Billing Period.

5 **Q. PLEASE DESCRIBE THE METHODOLOGY DUKE ENERGY**
6 **PROGRESS USED TO CALCULATE THE INCREMENTAL COSTS OF**
7 **COMPLIANCE WITH THE REPS REQUIREMENTS.**

8 A. Company Witness Payne describes the costs Duke Energy Progress incurred
9 during the Test Period and the costs it projects to incur during the Billing Period
10 to comply with its REPS requirements. General Statute § 62-133.8(h)(1)
11 provides that “incremental costs” means “all reasonable and prudent costs
12 incurred by an electric power supplier” to comply with the REPS requirements
13 “that are in excess of the electric power supplier’s avoided costs other than those
14 costs recovered pursuant to G.S. § 62-133.9.”

15 For purchased power agreements with renewable energy facilities, Duke
16 Energy Progress subtracted its avoided cost, as determined pursuant to R8-
17 67(a)(2), from the total cost associated with each renewable energy purchase to
18 arrive at the incremental cost related to the renewable energy purchase during
19 the period in question. For biogas purchases forecast to be used to produce
20 renewable energy at the Company’s generating stations, the incremental cost is
21 calculated by subtracting the applicable avoided cost (as determined pursuant
22 to R8-67(a)(2)) from the total biogas cost associated with the MWhs generated.

1 Consistent with Rule R8-67(e)(2), which provides that the cost of an
2 unbundled renewable energy certificate (“REC”) “is an incremental cost and
3 has no avoided cost component,” the total cost for REC purchases incurred
4 during the Test Period is included in incremental costs. Further, the projected
5 costs for REC purchases during the Billing Period are included as incremental
6 costs.

7 As described in detail by Company Witness Payne in his direct
8 testimony filed in this docket, the REPS EMF and Billing Period components
9 of the proposed REPS rider also include compliance-related incremental
10 administration costs, labor costs, and costs related to research incurred during
11 the EMF Period and estimated for the Billing Period, respectively. Additionally,
12 as further detailed in the testimony of Witness Payne, an amount equal to the
13 annual amortization of Solar Rebate Program costs incurred pursuant to G.S. §
14 62-155(f) applicable to the Billing Period is also included for recovery in the
15 proposed REPS rider.

16 **Q. PLEASE DESCRIBE HOW DUKE ENERGY PROGRESS ALLOCATES**
17 **INCREMENTAL REPS COSTS AMONG CUSTOMER CLASSES FOR**
18 **REPS AND REPS EMF RIDER PURPOSES.**

19 A. Incremental costs assigned to Duke Energy Progress’ NC Retail customers are
20 separated into two categories: costs related to solar, poultry and swine waste
21 compliance requirements, and research and other incremental and Solar Rebate
22 costs (“Set-Aside and Other Incremental Costs”); and costs related to the

1 General Requirement¹ (“General Incremental Costs”). This separation is based
2 on the percentages of Set-Aside and Other Incremental Costs, and General
3 Incremental Costs, calculated on Williams Exhibit No. 1. This separation is
4 calculated in Williams Exhibit No. 1.

5 Set-Aside and Other Incremental Costs are allocated among customer
6 classes based on per-account cost caps. General Incremental Costs are allocated
7 among customer classes in a manner that gives credit for EE RECs (for which
8 there are no General Incremental Costs) according to the relative energy
9 reduction contributed by each customer class. As a result, General Incremental
10 Costs are allocated among customer classes based on each class’ pro-rata share
11 of requirements for non-EE general RECs. The calculations for allocating
12 General Incremental Costs reflect the updated method recommended by the
13 Public Staff, and accepted by the Commission in its November 17, 2017 *Order*
14 *Approving REPS and REPS EMF Rider and Approving REPS Compliance*
15 *Report* in DEP’s 2017 REPS rider filing in Docket No. E-2, Sub 1144. The
16 Company notes that any deviation from allocating costs according to the
17 statutory per-account cost cap ratios creates the potential for the resulting
18 charges computed for one or more classes to exceed the per-account cost
19 cap(s). If that occurs, the Company would continue to reallocate the costs in
20 excess of the cap for the affected customer class to the other customer classes
21 to the extent required to produce charges for all classes that do not exceed the
22 respective caps.

¹ The Company generally refers to the “General Requirement” as its overall REPS requirement, set forth in N.C. Gen. Stat. § 62-133.8(b), net of the three set-asides.

1 **Q. PLEASE DESCRIBE HOW DUKE ENERGY PROGRESS**
2 **CALCULATED THE PROJECTED PORTION OF THE REPS RIDER**
3 **THAT THE COMPANY PROPOSES FOR THE BILLING PERIOD.**

4 A. Using the allocation methods described above, and as shown on Williams
5 Exhibit No. 3, the Set-Aside and Other Incremental Costs and the General
6 Incremental Costs are calculated by customer class for the Company's NC
7 Retail customers. The Set-Aside and Other Incremental Costs and General
8 Incremental Costs are summed for the Billing Period by customer class to arrive
9 at a total REPS cost to be collected from the Company's NC Retail customers.
10 On Williams Exhibit No. 4, the cost allocated to each customer class is then
11 divided by the total projected number of Duke Energy Progress NC Retail
12 accounts within each customer class to arrive at the total annual cost to be
13 recovered from each account over the Billing Period. The monthly NC Retail
14 REPS rider for each customer class is one-twelfth of the total annual cost.

15 **Q. PLEASE EXPLAIN THE CALCULATION OF THE PROPOSED REPS**
16 **EMF.**

17 A. Using the allocation methods described above, and as shown on Williams
18 Exhibit No. 2, the Set-Aside and Other Incremental Costs and the General
19 Incremental Costs are calculated by customer class for the Company's NC
20 Retail customers. The Set-Aside and Other Incremental Costs and General
21 Incremental Costs are summed for the Test Period by customer class to illustrate
22 the total REPS cost assigned to the Company's NC Retail customers. The
23 actual NC Retail revenues realized during the Test Period by customer class are

1 then subtracted from the total REPS costs by customer class to arrive at the
2 EMF for each class. On Williams Exhibit No. 4, the total EMF over/under
3 collection to be recovered from each customer class is adjusted to include any
4 credits to customers not considered a refund of amounts advanced by
5 customers, and then divided by the total projected number of Duke Energy
6 Progress NC Retail accounts within each customer class to arrive at the total
7 EMF to be recovered from each account over the Billing Period. The monthly
8 EMF for each customer class is one-twelfth of the total EMF.

9 **Q. DOES DUKE ENERGY PROGRESS DEFINE A “CUSTOMER” FOR**
10 **PURPOSES OF REPS BILLING IN ACCORDANCE WITH THE**
11 **COMMISSION’S ORDER ISSUED NOVEMBER 12, 2009 IN DOCKET**
12 **NO. E-2, SUB 948?**

13 A. Yes. Consistent with the Commission’s order issued November 12, 2009 in
14 Docket No. E-2, Sub 948, for purposes of REPS billing, a customer is defined
15 as all accounts (metered and unmetered) serving the same customer of the same
16 revenue classification located on the same or contiguous properties. If a
17 customer has accounts that serve in an auxiliary role to a main account on the
18 same premises, no REPS charge applies to the auxiliary accounts, regardless of
19 their revenue classification. Upon written notification from the customer,
20 accounts meeting these criteria are coded in the billing system to allow the
21 customer to receive only one monthly REPS charge for all identified accounts.

1 **Q. DOES THE COMPANY PROJECT THE REPS CHARGE TO EACH**
 2 **CUSTOMER ACCOUNT FOR THE BILLING PERIOD TO BE WITHIN**
 3 **THE ANNUAL COST CAPS DEFINED IN N.C. GEN. STAT. § 62-133.8?**

4 A. Yes. In NC House Bill 589, the General Assembly revised G.S. § 62-
 5 133.8(h)(4) to lower the annual cost cap for the Residential customer class from
 6 \$34.00 to \$27.00 in years subsequent to 2014, for cost recovery proceedings
 7 initiated on or after July 1, 2017. Accordingly, the Company has applied that
 8 revision to the cost caps in this cost recovery proceeding. As shown in Williams
 9 Exhibit No. 4, the annual charge for each customer class, including regulatory
 10 fee, is below the per-account cap as defined in N.C. Gen. Stat. § 62-133.8.

11 **Q. HOW DOES DUKE ENERGY PROGRESS PROPOSE TO COLLECT**
 12 **THE REPS CHARGES FROM EACH CUSTOMER CLASS?**

13 A. The Company proposes a fixed monthly charge be added to the bill for each
 14 class of customer.

15 **Q. WHAT IS THE MONTHLY REPS CHARGE PROPOSED BY THE**
 16 **COMPANY FOR EACH CUSTOMER CLASS?**

17 A. The Company proposes the following REPS charges to be effective December
 18 1, 2019.

Customer class	Per month – excluding regulatory fee	Per month – including regulatory fee	Annual – including regulatory fee	Annual per account cost cap
Residential	\$ 1.43	\$ 1.43	\$17.16	\$ 27.00
General	\$ 8.11	\$ 8.12	\$97.44	\$150.00
Industrial	\$ 58.59	\$ 58.67	\$704.04	\$1,000.00

19

20 **Q. WHAT IS THE CHANGE IN THE MONTHLY REPS CHARGE**
 21 **PROPOSED BY THE COMPANY FOR EACH CUSTOMER CLASS?**

- 1 A. The following tables show the proposed monthly REPS rider charges, and a
 2 comparison to the monthly REPS rider charges currently in effect – with and
 3 without the regulatory fee applied.

4 *Excluding regulatory fee*

Customer class	Proposed			Current			Change		
	EMF	Rider	Total	EMF	Rider	Total	EMF	Rider	Total
Residential	\$ 0.04	\$ 1.39	\$ 1.43	\$ 0.12	\$ 1.30	\$ 1.42	\$ (0.08)	\$ 0.09	\$ 0.01
General	\$(0.73)	\$ 8.84	\$ 8.11	\$(0.66)	\$ 8.61	\$ 7.95	\$(0.07)	\$ 0.23	\$ 0.16
Industrial	\$(4.48)	\$63.07	\$58.59	\$ 8.11	\$64.96	\$73.07	\$(12.59)	\$(1.89)	\$(14.48)

5

6 *Including regulatory fee:*

Customer class	Proposed			Current			Change		
	EMF	Rider	Total	EMF	Rider	Total	EMF	Rider	Total
Residential	\$ 0.04	\$ 1.39	\$ 1.43	\$ 0.12	\$ 1.30	\$ 1.42	\$ (0.08)	\$ 0.09	\$ 0.01
General	\$(0.73)	\$ 8.85	\$ 8.12	\$(0.66)	\$ 8.62	\$ 7.96	\$(0.07)	\$ 0.23	\$ 0.16
Industrial	\$(4.49)	\$63.16	\$58.67	\$ 8.12	\$65.05	\$73.17	\$(12.61)	\$(1.89)	\$(14.50)

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- 8 **Q. PLEASE DESCRIBE THE EEC INVENTORY DETAILS PRESENTED**
 9 **IN WILLIAMS EXHIBIT NO. 5.**

- 10 A. Williams Exhibit No. 5 shows a reconciliation of the Company's EEC inventory
 11 balance available for REPS compliance as of December 31, 2018, as well as
 12 references to the evaluation, measurement and verification ("EM&V") reports
 13 the results of which are incorporated into current EEC balances. The Company
 14 annually determines the level of EECs generated and available for REPS
 15 compliance, and this update includes the results of any periodic EM&V
 16 performed to-date, adjustments identified in the course of the Company's
 17 ongoing analysis of energy efficiency program effectiveness, as well as any
 18 other corrections. The updated cumulative level of EECs generated to date is
 19 compared to the number of EECs previously reported for compliance, less any

1 EECs used for compliance, to determine the EECs to be added to inventory in
2 the North Carolina Renewable Energy Certificate Tracking System for the most
3 recent calendar year. Williams Exhibit No. 5 shows the calculation of EECs
4 added to inventory for 2018, including details of the adjustments incorporated
5 therein.

6 **Q. DOES THE COMPANY CONTINUE TO INCORPORATE THE**
7 **COMMISSION'S ORDER ADDRESSING THE DURATION OF**
8 **ENERGY EFFICIENCY SAVINGS AS CALCULATED FOR REPS**
9 **COMPLIANCE PURPOSES?**

10 A. Yes. In its January 17, 2017 *Order Approving REPS and REPS EMF Rider and*
11 *REPS Compliance Report* in the Duke Energy Progress REPS Docket No. E-2,
12 Sub 1109, the Commission directed DEP to limit its continued recognition of
13 EE savings initiated in a particular EE program year to the life of the measure
14 or program as established in DEP's energy efficiency rider proceedings held
15 pursuant to G.S. § 62-133.9. Consistent with that Order, in this rider filing DEP
16 continues to calculate EE savings only for the duration of the established
17 measure life of each program or measure.

18 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

19 A. Yes.

1 (WHEREUPON, Revised Williams
2 Exhibits 1, 2 and 4 are marked for
3 identification as prefiled and
4 received into evidence.

5 Confidential filed under seal.)

6 (WHEREUPON, the prefiled
7 supplemental testimony of VERONICA
8 I. WILLIAMS is copied into the
9 record as if given orally from the
10 stand.)
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BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-2, SUB 1205

In the Matter of)
)
 Application of Duke Energy Progress, LLC)
 for Approval of Renewable Energy and)
 Energy Efficiency Portfolio Standard (REPS))
 Compliance Report and Cost Recovery Rider)
 Pursuant to N.C. Gen. Stat. § 62-133.8 and)
 Commission Rule R8-67)

**SUPPLEMENTAL
 TESTIMONY OF
 VERONICA I. WILLIAMS**

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Veronica I. Williams, and my business address is 550 South
3 Tryon Street, Charlotte, North Carolina.

4 **Q. DID YOU PREVIOUSLY FILE DIRECT TESTIMONY IN THIS**
5 **MATTER BEFORE THE NORTH CAROLINA UTILITIES**
6 **COMMISSION?**

7 A. Yes. I filed direct testimony on behalf of Duke Energy Progress, LLC (the
8 “Company”) in this matter on June 11, 2019.

9 **Q. WHAT IS THE PURPOSE OF YOUR SUPPLEMENTAL**
10 **TESTIMONY?**

11 A. The purpose of my supplemental testimony is to update the North Carolina
12 Utilities Commission on information presented in the exhibits filed with my
13 direct testimony. The Company determined that Confidential Payne Exhibit
14 No. 2, filed in this docket on June 11, 2019, reflected an error of omitted
15 data resulting in an understatement of incremental REPS rider cost. The
16 updated information presented in my supplemental testimony and exhibits
17 incorporates the Company’s correction of that error.

18 **Q. WHAT UPDATES NEED TO BE MADE TO THE EXHIBITS FILED**
19 **WITH YOUR DIRECT TESTIMONY?**

20 A. As described by Company witness Travis E. Payne in his supplemental
21 testimony filed in this docket, an adjustment is required to correct renewable
22 energy cost and the associated renewable energy certificate (“REC”)

1 quantity for one line item on Payne Exhibit No. 2 for the April 1, 2018
2 through March 31, 2019 test period (or “EMF Period”).

3 **Q. PLEASE IDENTIFY THE CORRECTIONS INCORPORATED IN**
4 **THE REVISED EXHIBITS FILED WITH THIS SUPPLEMENTAL**
5 **TESTIMONY AND THE RESULTING DIFFERENCES WHEN**
6 **COMPARED TO THE SAME EXHIBITS FILED PREVIOUSLY**
7 **WITH YOUR DIRECT TESTIMONY.**

8 A. Confidential Revised Williams Exhibit No. 1, Page 1 reflects the increase
9 to incremental REPS rider cost of \$585,128 identified by witness Payne in
10 his supplemental testimony filed in this docket. The following cost and
11 REC quantity components are added to the appropriate totals on Revised
12 Williams Exhibit No. 1, page 1: **[BEGIN CONFIDENTIAL]** [REDACTED]

13 [REDACTED]
14 [REDACTED]
15 [REDACTED]
16 [REDACTED]
17 [REDACTED]
18 [REDACTED]

19 [REDACTED] **[END CONFIDENTIAL]** Confidential Revised Williams
20 Exhibit No. 2, Page 1 shows the increase in incremental REPS cost for the
21 EMF period of \$585,128 on Line No. 4, and the totals shown on Line Nos.
22 9-12 are updated accordingly. These updated amounts carry forward to, and
23 are included in, totals shown on Revised Williams Exhibit No. 2, Page 2.

1 The result is a final change \$585,128, from an original net total \$276,977
2 overcollection for the EMF Period to an updated net total undercollection
3 of \$308,151 for the EMF Period, before the effect of interest. The General
4 service and Industrial customer classes show an overcollection for the EMF
5 Period before and after the update, but the overcollection amounts are less
6 than originally calculated as reflected on Revised Williams Exhibit No. 2,
7 page 2, and the corresponding interest credits on the overcollections by class
8 decreased by a total of \$48,075 as well. Including the change in
9 overcollection interest, the updated EMF Period shows a net total
10 undercollection of \$144,838, compared to a net total overcollection in the
11 original June 11, 2019 rider filing of \$488,365, reflecting a final cost
12 increase of \$633,203. Revised Williams Exhibit No. 4 includes the cost
13 changes by customer class for the EMF Period, and the resulting proposed
14 increases in monthly REPS charges by customer class over REPS charges
15 currently in effect are \$0.03 for Residential, \$0.29 for General service, and
16 the proposed decrease in the monthly REPS charge is \$13.59 for Industrial,
17 all including regulatory fee. The cost updates included in this supplemental
18 filing and revised exhibits affect only the EMF Period cost components of
19 the proposed riders, not the estimated billing period cost components.

20 The following tables show the currently-proposed revised monthly
21 REPS rider charges, and a comparison to the monthly REPS rider charges
22 proposed and filed with my direct testimony on June 11, 2019, and a

1 comparison to the monthly REPS rider charges currently in effect through
2 November 30, 2019 - with and without the regulatory fee applied.

3 Excluding regulatory fee:

Customer class	REVISED proposed REPS rider filed July 15, 2019	Proposed REPS rider filed June 11, 2019	Difference – increase/ (decrease)	Rider currently in effect through November 30, 2019	Difference – increase/ (decrease)
	(a)	(b)	(c) = (a) – (b)	(d)	(e) = (a) – (d)
Residential	\$ 1.45	\$1.43	\$0.02	\$1.42	\$0.03
General	\$ 8.24	\$8.11	\$0.13	\$7.95	\$0.29
Industrial	\$59.50	\$58.59	\$0.91	\$73.07	\$(13.57)

4

5 Including regulatory fee:

Customer class	REVISED proposed REPS rider filed July 15, 2019	Proposed REPS rider filed June 11, 2019	Difference – increase/ (decrease)	Rider currently in effect through November 30, 2019	Difference – increase/ (decrease)
	(a)	(b)	(c) = (a) – (b)	(d)	(e) = (a) – (d)
Residential	\$ 1.45	\$1.43	\$0.02	\$1.42	\$0.03
General	\$ 8.25	\$8.12	\$0.13	\$7.96	\$0.29
Industrial	\$59.58	\$58.67	\$0.91	\$73.17	\$(13.59)

6

7 **Q. DOES THIS CONCLUDE YOUR SUPPLEMENTAL TESTIMONY?**

8 A. Yes.

1 (WHEREUPON, 2nd Revised Williams
2 Exhibit 4 is marked for
3 identification as prefiled and
4 received into evidence.)

5 (WHEREUPON, the prefiled
6 additional supplemental testimony
7 of VERONICA I. WILLIAMS is copied
8 into the record as if given orally
9 from the stand.)

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BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-2, SUB 1205

In the Matter of)
)
 Application of Duke Energy Progress, LLC)
 for Approval of Renewable Energy and)
 Energy Efficiency Portfolio Standard (REPS))
 Compliance Report and Cost Recovery Rider)
 Pursuant to N.C. Gen. Stat. § 62-133.8 and)
 Commission Rule R8-67)

**ADDITIONAL
 SUPPLEMENTAL
 TESTIMONY OF
 VERONICA I. WILLIAMS**

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Veronica I. Williams, and my business address is 550 South
3 Tryon Street, Charlotte, North Carolina.

4 **Q. DID YOU PREVIOUSLY FILE TESTIMONY IN THIS MATTER**
5 **BEFORE THE NORTH CAROLINA UTILITIES COMMISSION?**

6 A. Yes. I filed direct testimony on behalf of Duke Energy Progress, LLC (the
7 “Company”) in this matter on June 11, 2019, and supplemental testimony
8 on behalf of the Company on July 18, 2019.

9 **Q. WHAT IS THE PURPOSE OF YOUR ADDITIONAL**
10 **SUPPLEMENTAL TESTIMONY?**

11 A. The purpose of my additional supplemental testimony is to update the North
12 Carolina Utilities Commission (the “Commission”) on information
13 presented on Revised Williams Exhibit No. 4 filed with my supplemental
14 testimony.

15 **Q. WHAT UPDATES NEED TO BE MADE TO THE EXHIBITS FILED**
16 **WITH YOUR SUPPLEMENTAL TESTIMONY?**

17 In his affidavit filed in this matter on August 19, 2019, Public Staff witness
18 Evan Lawrence noted that the Commission’s June 18, 2019 *Order*
19 *Decreasing Regulatory Fee Effective July 1, 2019* in Docket No. M-100,
20 Sub 142, reduced the regulatory fee from 0.14% to 0.13%. Witness
21 Lawrence stated the Public Staff’s recommendation that the Company make
22 a supplemental filing to update Revised Williams Exhibit No. 4 to reflect
23 the current regulatory fee multiplier and the resulting offsetting adjustments

1 to the “Monthly EMF Rider” and the “Monthly REPS Rider” amounts that
2 include the regulatory fee. As noted by witness Lawrence, the net effect is
3 no change to any of the combined monthly riders for the residential, general
4 service, or industrial customer classes. However, applicable to the
5 industrial customer class only, updating the current regulatory fee results in
6 an increase (a reduction in the credit) of \$0.01 in the Monthly EMF Rider,
7 and an offsetting decrease of \$0.01 in the Monthly REPS Rider, with no
8 change to the proposed combined monthly REPS rider. The updated
9 regulatory fee is incorporated in 2nd Revised Williams Exhibit No. 4 filed
10 with this additional supplemental testimony.

11 **Q. PLEASE IDENTIFY THE CHANGES IN THE PROPOSED**
12 **MONTHLY REPS RIDER COMPONENTS RESULTING FROM**
13 **UPDATING THE REGULATORY FEE MULTIPLIER.**

14 A. The following table compares the REPS rider components, including the
15 regulatory fee, as proposed and shown on 2nd Revised Williams Exhibit
16 No.4 filed with this additional supplemental testimony, to rider components
17 shown on Revised Williams Exhibit No. 4 filed with my supplemental
18 testimony on July 18, 2019.

1

2 nd Revised Williams Exhibit No. 4 – filed on August 27, 2019				
Customer class	Regulatory Fee Multiplier	Monthly EMF Rider including Regulatory Fee	Monthly REPS Rider including Regulatory Fee	Combined Monthly Rider including Regulatory Fee
Residential	1.001302	\$ 0.06	\$ 1.39	\$ 1.45
General	1.001302	\$ (0.60)	\$ 8.85	\$ 8.25
Industrial	1.001302	\$ (3.57)	\$ 63.15	\$ 59.58
Revised Williams Exhibit No. 4 – filed on July 18, 2019				
Customer class	Regulatory Fee Multiplier	Monthly EMF Rider including Regulatory Fee	Monthly REPS Rider including Regulatory Fee	Combined Monthly Rider including Regulatory Fee
Residential	1.001402	\$ 0.06	\$ 1.39	\$ 1.45
General	1.001402	\$ (0.60)	\$ 8.85	\$ 8.25
Industrial	1.001402	\$ (3.58)	\$ 63.16	\$ 59.58
Difference – proposed rider components with updated regulatory fee				
Customer class		Monthly EMF Rider including Regulatory Fee	Monthly REPS Rider including Regulatory Fee	Combined Monthly Rider including Regulatory Fee
Residential		\$ 0.00	\$ 0.00	\$ 0.00
General		\$ 0.00	\$ 0.00	\$ 0.00
Industrial		\$ 0.01	\$ (0.01)	\$ 0.00

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3 **Q. DOES THIS CONCLUDE YOUR ADDITIONAL SUPPLEMENTAL**
4 **TESTIMONY?**

5 **A. Yes.**

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(WHEREUPON, the prefilled affidavit
and Appendix A of EVAN D. LAWRENCE
is copied into the record as if
given orally from the stand.)

DOCKET NO. E-2, SUB 1205

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of		
Application of Duke Energy Progress, LLC, for)	<u>AFFIDAVIT</u>
Approval of Renewable Energy and Energy Efficiency)	<u>OF</u>
Portfolio Standard Cost Recovery Rider Pursuant to)	<u>EVAN D. LAWRENCE</u>
G.S. 62-133.8 and Commission Rule R8-67)	

STATE OF NORTH CAROLINA

COUNTY OF WAKE

I, Evan D. Lawrence, first being duly sworn, do depose and say:

I am an Engineer with the Electric Division of the Public Staff - North Carolina Utilities Commission. A summary of my education and experience is attached to this affidavit as Appendix A.

The purpose of my affidavit is to make recommendations to the Commission on the Renewable Energy and Energy Efficiency Portfolio Standard (REPS) Compliance Report filed by Duke Energy Progress, LLC (DEP or the Company), on June 11, 2019, and on the proposed REPS cost recovery rider filed by the Company on the same day, and revised on July 16, 2019. These recommendations are based on a review of DEP's application, DEP's filed testimony and REPS Compliance Report, DEP's newly signed renewable energy contracts, DEP responses to Public Staff data requests, reports generated from within the North Carolina Renewable Energy Tracking System (NC-RETS), and the affidavit of Public Staff witness Michelle Boswell.

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REPS COMPLIANCE REPORT

DEP is legally obligated to acquire renewable energy certificates (RECs) in accordance with N.C. Gen. Stat. § 62-133.8. DEP no longer provides any REPS compliance services to any wholesale customers as of January 1, 2018.

For 2018 compliance, DEP obtained a sufficient number of general RECs,¹ energy efficiency certificates (EECs), and RECs derived from other eligible sources so that the total equaled 10% of the 2017 North Carolina retail electricity sales. As part of the 10%, DEP needed to pursue retirement of sufficient solar RECs to match 0.2% of retail sales in 2017 (solar set-aside), and sufficient poultry waste RECs to match their pro-rata share of the 300,000 poultry waste RECs required by N.C. Gen. Stat. § 62-133.8(f). This total number of poultry waste RECs was determined by the Commission in its October 8, 2018, *Order Modifying the Swine and Poultry Waste Set-Aside Requirements and Providing Other Relief* in Docket No. E-100, Sub 113 (October 8 Order). The October 8 Order also reduced DEP's swine waste REC requirement under N.C. Gen. Stat. § 62-133.8(e) to 0.02% of 2017 retail sales.

Based on its review, the Public Staff has determined that DEP's REPS Compliance Report meets the requirements of N.C. Gen. Stat. § 62-133.8 and Commission Rule R8-67(c). Accordingly, the Public Staff recommends that the Commission approve DEP's 2018 REPS Compliance Report.

¹ General RECs include all RECs other than those used to meet the solar, swine waste, and poultry waste set-asides. General RECs and EECs are interchangeable for REPS compliance purposes, with the exception that EECs are limited to 25 percent of the total compliance requirement for 2018.

PROPOSED REPS RIDER CHARGES

The proposed REPS rider is based on the projected costs and projected number of accounts subject to a REPS charge in the billing period (December 1, 2019 through November 30, 2020). The Experience Modification Factor (EMF) is based on the incremental costs in the EMF period (April 1, 2018 through March 31, 2019) and the average number of accounts subject to a REPS charge in the billing period. The EMF is discussed more fully in the affidavit of Public Staff witness Michelle Boswell.

In its revised filing on July 16, 2019, DEP requested the following monthly charges for the REPS and EMF billing components of its REPS rider for the billing period:

Customer Class	REPS Rider	EMF	Total	Total Including Regulatory Fee
Residential	\$ 1.39	\$ 0.06	\$ 1.45	\$ 1.45
General Service	\$ 8.84	(\$ 0.60)	\$ 8.24	\$ 8.25
Industrial	\$ 63.07	\$ (3.57)	\$ 59.50	\$ 59.58

To collect the utility regulatory fee established by N.C. Gen. Stat. § 62-302, the total REPS charge (including the prospective charge and the EMF) must be multiplied by a factor reflecting the current regulatory fee. The Public Staff notes that the Commission on June 18, 2019 issued its *Order Decreasing Regulatory*

Fee Effective July 1, 2019, in Docket No. M-100, Sub 142, which reduced the regulatory fee from 0.14% to 0.13%. Applying the updated regulatory fee factor to DEP's requested REPS and EMF billing components results in the industrial class EMF and billing period rates increasing/(decreasing) by \$0.01 and (\$0.01), respectively, resulting in no net change to the combined Monthly Rider. To clarify this point, however, the Public Staff recommends that DEP make a supplemental filing to update Revised Williams Exhibit No. 4 to reflect the current regulatory fee multiplier and the offsetting adjustments to the Monthly EMF Rider and Monthly REPS Rider amounts that include the regulatory fee.

The Public Staff has reviewed the costs that produce the above proposed rates and, other than the revision to reflect the current regulatory fee, takes no issue with DEP's proposed rates. Accordingly, the Public Staff recommends approval of DEP's proposed REPS rider for residential, general service, and industrial customers, adjusted to reflect the current regulatory fee.

For comparison, the table below provides the existing monthly EMF and REPS billing components approved in Docket No. E-2, Sub 1175, on November 8, 2018.

Customer Class	REPS Rider	EMF	Total	Total Including Regulatory Fee
Residential	\$ 1.30	\$ 0.12	\$ 1.42	\$ 1.42
General Service	\$ 8.61	(\$ 0.66)	\$ 7.95	\$ 7.96
Industrial	\$ 64.96	\$ 8.11	\$ 73.07	\$ 73.17

Competitive Procurement of Renewable Energy Program Costs

Although DEP has not included any costs related to the Competitive Procurement of Renewable Energy (CPRE) Program, enacted in 2017 as part of North Carolina House Bill 589 (HB 589), in this proceeding, DEP witness Payne states that since DEP will use the RECs acquired through CPRE for REPS compliance, DEP believes that CPRE program implementation costs could be recovered through the REPs Rider. As discussed in my May 20, 2019, testimony filed in the 2019 REPS cost recovery proceeding filed by Duke Energy Carolinas, LLC in Docket No. E-7, Sub 1191, the Public Staff does not agree with DEP's conclusion that CPRE costs can be recovered through the REPs Rider. However, the issue does not need to be addressed by Commission unless DEP requests to recover CPRE costs in a future REPS rider proceeding.

Combination of Multiple REC Types in Compliance Costs Exhibit

Payne Confidential Exhibit No. 2 provides actual and forecasted REPS compliance costs, by resource. The Company breaks the REC purchases down by REC type, and by supplier. REC suppliers with multiple REC sources (i.e. thermal and general biomass) are typically listed multiple times, however the Company has combined entries in this filing, such as is the case with line 234 in Payne Exhibit No. 2. While this does not alter the amounts paid for energy or RECs, it does create the need for additional discovery so that the Public Staff can verify calculations and payments made. The Public Staff requests that in future proceedings, each REC type be presented as a separate line item, similar to lines 232 and 233 in Payne Exhibit No. 2.

This completes my affidavit.

Evan Lawrence
Evan D. Lawrence

Sworn to and subscribed before me
this the 19th day of August, 2019.

Joanne M. Berube
Notary Public

Joanne M. Berube
NOTARY PUBLIC
WAKE COUNTY, N.C.
My Commission Expires 12-17-2022.

JOANNE M. BERUBE
Printed Name

My Commission Expires: 12/17/2022

Appendix A

Evan D. Lawrence

I graduated from East Carolina University in Greenville, North Carolina in May of 2016 earning a Bachelor of Science degree in Engineering and a concentration in Electrical Engineering. I started my current position with the Public Staff in September of 2016. Since that time my duties and responsibilities have focused around the review of renewable energy projects, rate design, and renewable energy portfolio standards (REPS) compliance. I have filed affidavits in Dominion Energy North Carolina's 2017 and 2018 REPS cost recovery proceeding, affidavits in the 2019 REPS cost recovery proceeding filed by Duke Energy Carolinas, LLC (DEC); testimony in New River Light and Power's (NRLP) most recent rate case proceeding, and testimony in additional small power producer and merchant electric generating facilities (EMPs). I have also assisted other Public Staff personnel with the review and investigation of REPS Compliance Plans filed by the electric power suppliers, previous DEC and DEP REPS cost recovery proceedings, and multiple other cases.

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(WHEREUPON, the prefilled affidavit
and Appendix A of MICHELLE M.
BOSWELL is copied into the record
as if given orally from the
stand.)

DOCKET NO. E-2, SUB 1205

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of		
Application of Duke Energy Progress, LLC, for)	<u>AFFIDAVIT</u>
Approval of Renewable Energy and Energy Efficiency)	<u>OF</u>
Portfolio Standard Cost Recovery Rider Pursuant to)	<u>MICHELLE BOSWELL</u>
G.S. 62-133.8 and Commission Rule R8-67)	

STATE OF NORTH CAROLINA

COUNTY OF WAKE

I, Michelle Boswell, first being duly sworn, do depose and say:

I am a Staff Accountant with the Accounting Division of the Public Staff - North Carolina Utilities Commission. A summary of my education and experience is attached to this affidavit as Appendix A.

N.C. Gen. Stat. § 62-133.8(h) provides that the State's electric power suppliers may recover their reasonable and prudently incurred incremental costs of compliance with the Renewable Energy and Energy Efficiency Portfolio Standard (REPS) through an annual rider charge. Pursuant to Commission Rule R8-67, the REPS rider will be recovered over the same period as the utility's fuel and fuel-related cost rider. Rule R8-67 also provides for a REPS experience modification factor (REPS EMF) rider, which is utilized to "true-up" the recovery of reasonable and prudently incurred incremental REPS compliance costs incurred during the test period established for each annual rider proceeding.

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The purpose of my affidavit is to present the results of the Public Staff's investigation of the REPS EMF rider proposed by Duke Energy Progress, LLC (DEP or the Company), in this proceeding, based on incremental REPS compliance costs incurred and revenues recorded from April 2018 through March 2019 (REPS EMF period or test period).

On June 11, 2019, DEP filed its application, testimony, and exhibits related to the incremental costs incurred for compliance with the REPS. On July 16, 2019, DEP filed supplemental testimony and revised exhibits to correct an error that resulted in the understatement of incremental REPS rider costs. Revised Williams Exhibit No. 4 sets forth the revised proposed annual and monthly EMF increment or decrement riders for each of the North Carolina retail customer classes. The revised proposed annual EMF increment/(decrement) riders, excluding the North Carolina regulatory fee, for the residential, general, and industrial customers, respectively, are \$0.73, \$(7.15), and \$(42.81) per retail customer account. These rates are calculated by dividing the "Total EMF Costs/(Credits)" amount, as shown on Revised Williams Exhibit No. 4 for each customer class, by the "Total Projected Number of Accounts – DEP NC Retail" for that class. The revised proposed monthly EMF increment/(decrement) riders, excluding the regulatory fee, for residential, general, and industrial customers, respectively, are \$0.06, \$(0.60), and \$(3.57) per retail customer account.

The Public Staff's investigation included procedures intended to evaluate whether the Company properly determined its per books incremental compliance costs and revenues, as well as the annual revenue cap for REPS requirements,

during the test period. These procedures included a review of the Company's filing and other Company data provided to the Public Staff. Additionally, the procedures included a review of certain specific types of expenditures impacting the Company's costs, including labor and research and development costs. Performing the Public Staff's investigation required the review of numerous responses to written and verbal data requests, and discussions with Company personnel.

As a result of the Public Staff's investigation, I am recommending that DEP's revised proposed annual and monthly REPS EMF increment or decrement riders for each customer class be approved. These amounts produce annual increment/(decrement) REPS EMF riders of \$0.73, \$(7.15), and \$(42.81), and monthly increment/(decrement) REPS EMF riders of \$0.06, \$(0.60), and \$(3.57), per customer account, excluding the regulatory fee, for residential, general, and industrial customers, respectively.

This completes my affidavit.

Michelle Boswell

 Michelle Boswell

Sworn to and subscribed before me
 this the 19 day of August, 2019.

NR Patel

 Neha R. Patel
 Notary Public

My Commission Expires: 3/18/2024



Appendix A**MICHELLE M. BOSWELL****Qualifications and Experience**

I graduated from North Carolina State University in 2000 with a Bachelor of Science degree in Accounting. I am a Certified Public Accountant.

I am responsible for (1) examining and analyzing testimony, exhibits, books and records, and other data presented by utilities and other parties under the jurisdiction of the Commission or involved in Commission proceedings, and (2) preparing and presenting testimony, exhibits, and other documents for presentation to the Commission.

I joined the Public Staff in September 2000. I have performed numerous audits and/or presented testimony and exhibits before the Commission addressing a wide range of electric, natural gas, and water topics. I have performed audits and/or presented testimony in the Duke Energy Carolinas, LLC's 2010, 2015, 2017, and 2019 REPS Cost Recovery Rider; DEP's 2014, 2017, and 2018 REPS Cost Recovery Rider; the 2008 REPS Compliance Reports for North Carolina Municipal Power Agency 1, North Carolina Eastern Municipal Power Agency, GreenCo Solutions, Inc., and EnergyUnited Electric Membership Corporation; DEC's 2017 rate case, four recent Piedmont Natural Gas (Piedmont) rate cases; the 2016 rate case of Public Service Company of North Carolina (PSNC), the 2012 rate case for Dominion Energy North Carolina

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01/10/2019

(DENC, formerly Dominion North Carolina Power), the 2013 and 2017 DEP rate cases, several Piedmont, NUI Utilities, Inc. (NUI), and Toccoa annual gas cost reviews; the merger of Piedmont and NUI; and the merger of Piedmont and North Carolina Natural Gas (NCNG).

Additionally, I have filed testimony and exhibits in numerous water rate cases and performed investigations addressing a wide range of topics and issues related to the water, electric, and telephone industries.

1 COMMISSIONER CLODFELTER: Are there any
2 other matters, preliminary, that need to be dealt
3 with?

4 MR. SMITH: I apologize. Ben Smith, NCSEA.
5 I came in late and I'd just like to enter my
6 appearance if possible.

7 COMMISSIONER CLODFELTER: Okay. Mr. Smith,
8 let me further, for the record, ask you have you
9 examined the docket in the Clerk's office and are you
10 satisfied that the matters that are reflected on the
11 Clerk's docket are complete, are accurate, and that no
12 matters have been improperly filed in the docket?

13 MR. SMITH: Yes.

14 COMMISSIONER CLODFELTER: Great. And, if I
15 recall correctly, you don't have any testimony,
16 prefiled testimony?

17 MR. SMITH: No, we do not.

18 COMMISSIONER CLODFELTER: All right. Let me
19 ask the parties, are there any additional witnesses
20 who did not prefile testimony whom any party plans to
21 call today?

22 MR. KAYLOR: No.

23 MS. FENNEL: (Shakes head no).

24 COMMISSIONER CLODFELTER: Let me ask the

1 Public Staff, have you identified any public witnesses
2 present who wish to testify in the docket?

3 MS. FENNELL: No.

4 COMMISSIONER CLODFELTER: Let me ask the
5 audience, is there any one person here who wishes to
6 give public witness testimony this afternoon in this
7 docket?

8 (No response)

9 COMMISSIONER CLODFELTER: Seeing no one,
10 then we will close the evidentiary record at this
11 proceeding, unless counsel have additional matters to
12 submit.

13 MR. KAYLOR: Commissioner, the -- we have
14 agreed with the Public Staff to work on the joint
15 proposed order and file that within 30 days of the
16 transcript.

17 COMMISSIONER CLODFELTER: That's fine, 30
18 days of the transcript.

19 That concludes the hearing. Thank you.

20 (The proceedings were adjourned)

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C E R T I F I C A T E

I, KIM T. MITCHELL, DO HEREBY CERTIFY that
the Proceedings in the above-captioned matter were
taken before me, that I did report in stenographic
shorthand the Proceedings set forth herein, and the
foregoing pages are a true and correct transcription
to the best of my ability.

Kim T. Mitchell _____

Kim T. Mitchell
Court Reporter