

1 PLACE: Dobbs Building, Raleigh, North Carolina
2 DATE: Tuesday, September 18, 2018
3 TIME: 9:40 a.m. - 9:47 a.m.
4 DOCKET NO: E-2, Sub 1175
5 BEFORE: Commissioner Daniel G. Clodfelter, Presiding
6 Chairman Edward S. Finley, Jr.
7 Commissioner ToNola D. Brown-Bland
8 Commissioner Jerry C. Dockham
9 Commissioner James G. Patterson
10 Commissioner Lyons Gray
11 Commissioner Charlotte A. Mitchell
12

13 **IN THE MATTER OF:**

14 Application of Duke Energy Progress, LLC,
15 for Approval of Renewable Energy and Energy Efficiency
16 Portfolio Standard Cost Recovery Rider Pursuant to
17 G.S. 62-133.8 and
18 Commission Rule R8-67.
19
20
21
22
23
24

1 A P P E A R A N C E S :

2 FOR DUKE ENERGY PROGRESS, LLC:

3 Kendrick C. Fentress, Esq.

4 Associate General Counsel

5 401 Wilmington Street

6 Raleigh, North Carolina 27601

7

8 Robert W. Kaylor, Esq.

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

10 353 E. Six Forks Road, Suite 260

11 Raleigh, North Carolina 27609

12

13 FOR NORTH CAROLINA SUSTAINABLE ENERGY ASSOCIATION:

14 Benjamin Smith, Esq.

15 Regulatory Counsel

16 4600 Six Forks Road, Suite 300

17 Raleigh, North Carolina 27609

18

19 FOR CAROLINA UTILITY CUSTOMERS ASSOCIATION, INC.:

20 Robert F. Page, Esq.

21 Crisp & Page, PLLC

22 4010 Barrett Drive, Suite 205

23 Raleigh, North Carolina 27609

24

NORTH CAROLINA UTILITIES COMMISSION

1 A P P E A R A N C E S Cont'd.:
2 FOR THE USING AND CONSUMING PUBLIC:
3 Tim R. Dodge, Esq.
4 Public Staff - North Carolina Utilities Commission
5 4326 Mail Service Center
6 Raleigh, North Carolina 27699-4300
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

T A B L E O F C O N T E N T S

E X A M I N A T I O N S :

VERONICA I. WILLIAMS

Prefiled Direct Testimony..... 11

MEGAN W. JENNINGS

Prefiled Direct Testimony..... 28

JAY B. LUCAS

Prefiled Affidavit and Appendix A..... 59

MICHELLE BOSWELL

Prefiled Affidavit and Appendix A..... 67

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

E X H I B I T S

Identified/Admitted

Williams Confidential Exhibit 1..... /11

Williams Exhibit 2, including
 confidential page 1..... /11

Williams Exhibit 3, including
 confidential page 1..... /11

Williams Exhibits 4 and 5..... /11

Jennings Exhibits 1, including
 confidential pages 3, 6, 7, and
 confidential Appendix 1..... /28

Jennings Confidential Exhibit 2..... /28

Jennings Confidential Exhibit 3..... /28

Jennings Exhibits 4 and 5..... /28

Jennings Confidential Exhibits 6 and 7.... /28

Jennings Exhibit 8..... /28

Jennings Confidential Exhibits 9 and 10... /28

Application of Duke Energy Progress, LLC.. /58

(All Confidential Exhibits are
filed under seal.)

P R O C E E D I N G S

1
2 COMMISSIONER CLODFELTER: Good morning,
3 again. Let's come to order, and we'll go back on the
4 record. I'm Commissioner Dan Clodfelter, and I have
5 been assigned by the Chairman to preside during this
6 proceeding. With me this morning are Chairman Finley,
7 and Commissioners Brown-Bland, Dockham, Patterson,
8 Gray and Mitchell.

9 I call for hearing now Docket Number E-2,
10 Sub 1175, which is titled In the Matter of Application
11 of Duke Energy Progress, LLC, for Approval of
12 Renewable Energy and Energy Efficiency Portfolio
13 Standard Cost Recovery Rider Pursuant to N.C.G.S.
14 62-133.8 and Commission Rule R8-67. I think you need
15 a longer title, I think.

16 In compliance with the requirements of the
17 State Government Ethics Act, I will remind all of the
18 Commissioners of our duty to avoid conflicts of
19 interest, and at this time will inquire whether any
20 member of the Commission has a known conflict of
21 interest with respect to this docket?

22 (No response)

23 The record will reflect that no Commissioner
24 identified any conflicts in this matter.

1 On June 20, 2018, Duke Energy Progress,
2 hereafter referred to as Progress, filed its annual
3 Application for Approval of Renewable Energy and
4 Energy Efficiency Portfolio Standard Cost Recovery
5 Rider and its 2017 Compliance Report pursuant to
6 Commission Rule R8-67, along with written direct
7 testimonies and exhibits of Megan W. Jennings
8 consisting of 29 pages of direct testimony and 10
9 exhibits, five of which were marked with confidential
10 contents; and the testimony of Veronica Williams
11 consisting of 16 pages of direct testimony and five
12 exhibits, three of which contain confidential
13 material.

14 On July 2, 2018, the Commission issued its
15 Order Scheduling Hearing for this time and place,
16 establishing discovery deadlines -- guidelines and
17 setting deadlines for the parties to file their
18 testimony, and requiring the Applicant to publish
19 notice of the hearing.

20 Participation in this docket by the
21 Utilities Commission - Public Staff is recognized
22 pursuant to G.S. 62-15.

23 Upon separate motions, the North Carolina
24 Sustainable Energy Association and the Carolina

1 Utility Customers Association have moved to intervene
2 and were allowed to intervene as parties in this
3 proceeding by separate Commission Orders.

4 Ms. Hicks, I know you're here but you did
5 not file on behalf of CIGFUR II a Motion to Intervene
6 in this particular docket, correct?

7 MS. WARREN: We did not.

8 COMMISSIONER CLODFELTER: Correct. Thanks.

9 On August 29, 2018, the Public Staff filed
10 the Affidavits of Jay Lucas, consisting of six pages,
11 including an Appendix A; and the Affidavit of Michelle
12 Boswell, consisting of four pages and an Appendix A.

13 On September 13, 2018, Progress filed
14 Affidavits of Publication evidencing newspaper
15 publication of the public notice of today's hearing in
16 this matter.

17 On September 13, 2018, the Commission issued
18 an Order Granting the motion by Progress to excuse
19 witnesses from attending this evidentiary hearing, and
20 the motion to receive their testimony, exhibits,
21 workpapers and affidavits into evidence at the
22 hearing.

23 With that procedural history, I'll call on
24 counsel for the parties to make their appearances for

1 the record now, beginning with the Applicant.

2 MR. KAYLOR: Thank you, Mr. Chairman.

3 Members of the Commission, Robert Kaylor appearing on
4 behalf of Duke Energy Progress.

5 MS. FENTRESS: Good morning. Mr. Chairman,
6 Members of the Commission, Kendrick Fentress appearing
7 on behalf of Duke Energy Progress.

8 MR. PAGE: Robert Page appearing on behalf
9 of the Carolina Utility Customers Association.

10 MR. DODGE: Good morning. I'm Tim Dodge
11 with the Public Staff. We represent the Using and
12 Consuming Public.

13 MR. SMITH: Ben Smith for the North Carolina
14 Sustainable Energy Association.

15 COMMISSIONER CLODFELTER: Thank you. Are
16 there any preliminary procedural matters we need to
17 address?

18 MS. FENTRESS: None from the Company.

19 MR. DODGE: No, sir.

20 COMMISSIONER CLODFELTER: If not, Mr. Dodge,
21 have you identified any public witnesses who are
22 present to testify in this particular docket?

23 MR. DODGE: We have not identified any
24 public witnesses.

1 generally of the audience, is there anyone here
2 present this morning who desires to provide testimony
3 as a public witness in this proceeding?

4 (No response)

5 Let the record reflect that no one came
6 forward to present testimony.

7 With that, we'll turn the matter over the
8 Applicant.

9 MS. FENTRESS: Thank you. Mr. Chairman, as
10 you just indicated, the parties have agreed to waive
11 cross examination of all the witnesses who have
12 prefiled testimony in this docket and have asked that
13 their prefiled testimony be entered into the record as
14 if given orally from the stand, and that their
15 exhibits which have been premarked also be entered
16 into evidence. With that, I would like to move
17 through the witnesses and enter their testimony into
18 the record.

19 COMMISSIONER CLODFELTER: You may do so.

20 MS. FENTRESS: I will start with Veronica
21 Williams. I would move that Veronica Williams direct
22 testimony filed June 20, 2018, consisting of 16 pages
23 be entered into the record as if given orally from the
24 stand, and that the five exhibits to her direct

1 testimony be admitted as evidence.

2 COMMISSIONER CLODFELTER: Without objection,
3 that motion is granted. And I assume the confidential
4 designations will remain in the record as well.

5 MS. FENTRESS: That's correct. Thank you.

6 COMMISSIONER CLODFELTER: Thank you.

7 (WHEREUPON, Williams Confidential
8 Exhibit 1; Williams Exhibit 2,
9 including confidential page 1;
10 Williams Exhibit 3, including
11 confidential page 1; Williams
12 Exhibits 4 and 5 are admitted into
13 evidence.)

14 (WHEREUPON, the prefiled direct
15 testimony of VERONICA I. WILLIAMS
16 is copied into the record as if
17 given orally from the stand.)
18
19
20
21
22
23
24

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-2, SUB 1175

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
3 Tryon 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,
8 providing guidance on Renewable Energy and Energy Efficiency Portfolio
9 Standard ("REPS") compliance and cost recovery for Duke Energy Progress,
10 LLC ("Duke Energy Progress," "DEP," or the "Company") and Duke Energy
11 Carolinas, LLC ("Duke Energy Carolinas" or "DEC"), and preparing and
12 filing testimony and exhibits in annual DEP and DEC REPS rider
13 proceedings.

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

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

1 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE NORTH**
2 **CAROLINA UTILITIES COMMISSION?**

3 A. Yes. I most recently provided testimony in Docket No. E-7, Sub 1162
4 regarding Duke Energy Carolinas' 2017 REPS compliance report and
5 application for approval of its REPS cost recovery rider, and in Docket No. E-
6 2, Sub 1144 regarding Duke Energy Progress' 2016 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.
11 Gen. Stat. ("G.S.") § 62-133.8 and to present the information and data
12 required by Commission Rule R8-67 as set forth in Williams Exhibit Nos. 1
13 through 4. The test period used in supplying this information and data is the
14 twelve months beginning on April 1, 2017 and ending on March 31, 2018
15 ("Test Period" or "EMF Period"), and the billing period for the REPS rider
16 requested in the Company's application is the twelve months beginning on
17 December 1, 2018 and ending on November 30, 2019 ("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

1 Williams Exhibit No. 1, to the Company's NC Retail customer classes for the
2 Test Period. Williams Confidential Exhibit No. 3 ("Williams Exhibit No. 3")
3 shows the allocation of the total expected REPS compliance costs, identified
4 on Williams Exhibit No. 1, to the Company's NC Retail customer classes for
5 the Billing Period. Williams Exhibit No. 4 shows the total REPS rider
6 amounts proposed, including the REPS Experience Modification Factor
7 ("EMF"), by customer class, compared to the cost cap for each customer
8 class. Finally, Williams Exhibit No. 5 is a worksheet detailing the Company's
9 energy efficiency certificate ("EEC") inventory balance as of December 31,
10 2017.

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

13 A. Yes.

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

16 A. The proposed REPS rider intends to recover Duke Energy Progress'
17 incremental costs of compliance with the renewable energy requirements
18 pursuant to G.S. § 62-133.8. The rider includes the REPS EMF component to
19 recover the difference between the compliance costs incurred and revenues
20 realized during the Test Period. The costs incurred during the Test Period are
21 presented in this filing to demonstrate their reasonableness and prudence as
22 provided in Rule R8-67(e). The proposed rider also includes a component to
23 recover the costs expected to be incurred for the Billing Period.

1 Q. PLEASE DESCRIBE THE METHODOLOGY DUKE ENERGY
2 PROGRESS USED TO CALCULATE THE INCREMENTAL COSTS
3 OF COMPLIANCE WITH THE REPS REQUIREMENTS.

4 A. Company Witness Jennings describes the costs Duke Energy Progress
5 incurred during the Test Period and the costs it projects to incur during the
6 Billing Period to comply with its REPS requirements. General Statute § 62-
7 133.8(h)(1) provides that “incremental costs” means “all reasonable and
8 prudent costs incurred by an electric power supplier” to comply with the
9 REPS requirements “that are in excess of the electric power supplier’s
10 avoided costs other than those costs recovered pursuant to G.S. § 62-133.9.”

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

19 With respect to the Company’s utility-owned solar generating
20 facilities, an annual revenue requirement, including capital and operations and
21 maintenance costs, was calculated for each facility for the period covering the
22 expected service life of the project. The present value of the total project
23 revenue requirement was levelized over the project life to produce a level

1 annual revenue requirement that was compared to avoided cost to determine
2 any annual incremental cost subject to cost recovery through the REPS rider.

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

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

18 **Q. WHAT CONDITIONS RELEVANT TO THIS PROCEEDING DID THE**
19 **COMMISSION INCLUDE IN ITS APPROVAL OF THE**
20 **CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR**
21 **EACH OF THE COMPANY’S SOLAR GENERATING FACILITIES?**

22 **A.** The Company’s Fayetteville, Warsaw, Camp Lejeune, and Elm City solar
23 generating facilities (“DEP Solar PV Facilities”) were in service for the
24 duration of the Test Period. The Commission included two conditions related

1 to cost recovery for the DEP Solar PV Facilities in its December 16, 2014
2 orders approving the transfer of each Certificate of Public Convenience and
3 Necessity ("CPCN") in Docket Nos. E-2, Subs 1054, 1055, 1056,
4 respectively, and in its April 14, 2015 order issuing a CPCN in Docket No. E-
5 2, Sub 1063 (collectively, the "CPCN Orders"). The first condition addressed
6 the avoided cost values to be used by the Company in subsequent calculations
7 of the avoided and incremental components of total cost for each of the
8 facilities. The Company agreed that, in the appropriate REPS rider and
9 general rate case proceedings, it would determine the levelized avoided cost
10 per MWh for each facility by using the same avoided energy and capacity cost
11 values included in the Company's analysis of the revenue requirements for
12 each facility, as presented during the CPCN proceedings. The second
13 condition relates to DEP's ability to realize certain tax benefits included in the
14 Company's revenue requirements analysis for each facility as presented
15 during the CPCN proceedings. The condition provides that, in the appropriate
16 REPS rider and general rate case proceedings, DEP will separately itemize the
17 actual monetization of the tax benefits listed in the Commission's orders
18 within its calculation of the levelized revenue requirement per MWh for each
19 facility, so that it may be compared with the monetization of such tax benefits
20 included in the Company's revenue requirement analysis of each facility
21 presented during the CPCN proceedings. To the extent the Company fails to
22 fully realize the tax benefits it originally assumed in its estimated revenue
23 requirements, costs associated with the increased revenue requirements (with

1 a limited exception) will be presumed to be imprudent and unreasonably
2 incurred. The condition further provides that DEP may rebut this presumption
3 with evidence supporting the reasonableness and prudence of its actual
4 monetization of the tax credits.

5 **Q. DID THE COMPANY COMPLY WITH THE TWO CONDITIONS**
6 **OUTLINED ABOVE IN THE APPROPRIATE REPS RIDER AND**
7 **GENERAL RATE CASE PROCEEDINGS?**

8 A. Yes. In the Company's 2016 annual REPS rider filing in Docket No. E-2, Sub
9 1109 and its 2017 annual REPS rider filing in Docket No. E-2, Sub 1144, the
10 Company updated its original models of estimated annual revenue
11 requirements to reflect its actual experience to date with regard to each of the
12 specified tax-related benefits, and the Company updated its estimates of the
13 timing of realization of the relevant tax benefits in future tax years. In
14 addition, the avoided cost components of the revenue requirement calculations
15 updated in these REPS rider dockets were fixed at the levels included in the
16 original CPCN revenue requirement calculations, as required by the CPCN
17 Orders. In each docket, the updated annual levelized revenue requirement for
18 each project remained below the annual levelized avoided cost, and no
19 incremental REPS cost was included for recovery in the respective REPS
20 rider.

21 On June 1, 2017, DEP filed its *Application for Adjustment in Rates*
22 *and Request for Accounting Order* in Docket No. E-2, Sub 1142, the
23 Company's first and only general rate case proceeding since the date of the

1 CPCN Orders. The DEP Solar PV Facilities costs were included in total in
2 the revenue requirement calculated and subject to recovery in base rates in the
3 general rate case docket. The Commission issued its February 23, 2018 *Order*
4 *Accepting Stipulation, Deciding Contested Issues and Granting Partial Rate*
5 *Increase* in Docket No. E-2, Sub 1142, in which the Commission accepted
6 DEP's conclusion that the facility costs included in its proposed base rates
7 were prudently incurred and approved recovery through base rates. The
8 Company is including no recovery of costs related to the DEP Solar PV
9 Facilities in its current REPS rider filing, and respectfully submits that it has
10 now met in full the cost recovery conditions of the CPCN Orders, and its
11 compliance requirement is completed.

12 **Q. PLEASE DESCRIBE HOW DUKE ENERGY PROGRESS**
13 **ALLOCATES INCREMENTAL REPS COSTS AMONG CUSTOMER**
14 **CLASSES FOR REPS AND REPS EMF RIDER PURPOSES.**

15 A. Incremental costs assigned to Duke Energy Progress' NC Retail customers are
16 separated into two categories: costs related to solar, poultry waste, and swine
17 waste compliance requirements, and research and other incremental and Solar
18 Rebate costs ("Set-Aside and Other Incremental Costs"); and costs related to
19 the General Requirement¹ ("General Incremental Costs"). This separation is
20 calculated in Williams Exhibit No. 1.

21 Set-Aside and Other Incremental Costs are allocated among customer
22 classes based on per-account cost caps. General Incremental Costs are

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 allocated among customer classes in a manner that gives credit for EE RECs
2 (for which there are no General Incremental Costs) according to the relative
3 energy reduction contributed by each customer class. As a result, General
4 Incremental Costs are allocated among customer classes based on each class'
5 pro-rata share of requirements for non-EE general RECs. The calculations for
6 allocating General Incremental Costs reflect the updated method
7 recommended by the Public Staff, and accepted by the Commission in its
8 November 17, 2017 *Order Approving REPS and REPS EMF Rider and*
9 *Approving REPS Compliance Report* ("2017 DEP REPS Order"), in DEP's
10 2017 REPS rider filing in Docket No. E-2, Sub 1144.

11 In the 2017 DEP REPS Order (at p. 20), the Commission further
12 directed that:

13 DEP and the Public Staff shall together evaluate the inputs and
14 methods used for the allocation of EE RECs by class, as well
15 as the allocation of the set-aside and general requirement cost
16 categories to customer class, and identify any further revisions
17 required. DEP and the Public Staff shall file the results of this
18 analysis no later than April 1, 2018, for use in the 2018 DEP
19 REPS rider.
20

21 The Commission subsequently extended the deadline for filing this
22 analysis to April 16, 2018 in its April 10, 2018 *Order Granting Motion for*
23 *Extension of Time* in the same docket. The Public Staff and the Company
24 then filed a *Joint Report of the Public Staff and Duke Energy Progress, LLC*
25 on April 12, 2018 ("Joint Report"), explaining the evaluation performed and
26 method agreed to, and requesting Commission acceptance of the method
27 described. The request is currently pending review by the Commission; the

1 process identified in the Joint Report is incorporated in this current DEP
2 REPS rider filing.

3 The Company notes that any deviation from allocating costs according
4 to the statutory per-account cost cap ratios creates the potential for the
5 resulting charges computed for one or more classes to exceed the per-account
6 cost cap(s). If that occurs, the Company would continue to reallocate the
7 costs in excess of the cap for the affected customer class to the other customer
8 classes to the extent required to produce charges for all classes that do not
9 exceed the respective caps.

10 **Q. PLEASE DESCRIBE HOW DUKE ENERGY PROGRESS**
11 **CALCULATED THE PROJECTED PORTION OF THE REPS RIDER**
12 **THAT THE COMPANY PROPOSES FOR THE BILLING PERIOD.**

13 A. Using the allocation methods described above, and as shown on Williams
14 Exhibit No. 3, the Set-Aside and Other Incremental Costs and the General
15 Incremental Costs are calculated by customer class for the Company's NC
16 Retail customers. The Set-Aside and Other Incremental Costs and General
17 Incremental Costs are summed for the Billing Period by customer class to
18 arrive at a total REPS cost to be collected from the Company's NC Retail
19 customers. On Williams Exhibit No. 4, the cost allocated to each customer
20 class is then divided by the total projected number of Duke Energy Progress
21 NC Retail accounts within each customer class to arrive at the total annual
22 cost to be recovered from each account over the Billing Period. The monthly

1 NC Retail REPS rider for each customer class is one-twelfth of the total
2 annual cost.

3 **Q. PLEASE EXPLAIN THE CALCULATION OF THE PROPOSED REPS**
4 **EMF.**

5 A. Using the allocation methods described above, and as shown on Williams
6 Exhibit No. 2, the Set-Aside and Other Incremental Costs and the General
7 Incremental Costs are calculated by customer class for the Company's NC
8 Retail customers. The Set-Aside and Other Incremental Costs and General
9 Incremental Costs are summed for the Test Period by customer class to
10 illustrate the total REPS cost assigned to the Company's NC Retail customers.
11 The actual NC Retail revenues realized during the Test Period by customer
12 class are then subtracted from the total REPS costs by customer class to arrive
13 at the EMF for each class. On Williams Exhibit No. 4, the total EMF
14 over/under collection to be recovered from each customer class is adjusted to
15 include any credits to customers not considered a refund of amounts advanced
16 by customers, and then divided by the total projected number of Duke Energy
17 Progress NC Retail accounts within each customer class to arrive at the total
18 EMF to be recovered from each account over the Billing Period. The monthly
19 EMF for each customer class is one-twelfth of the total EMF.

20 **Q. DOES DUKE ENERGY PROGRESS DEFINE A "CUSTOMER" FOR**
21 **PURPOSES OF REPS BILLING IN ACCORDANCE WITH THE**
22 **COMMISSION'S ORDER ISSUED NOVEMBER 12, 2009 IN DOCKET**
23 **NO. E-2, SUB 948?**

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

10 **Q. DOES THE COMPANY PROJECT THE REPS CHARGE TO EACH**
11 **CUSTOMER ACCOUNT FOR THE BILLING PERIOD TO BE**
12 **WITHIN THE ANNUAL COST CAPS DEFINED IN N.C. GEN. STAT.**
13 **§ 62-133.8?**

14 A. Yes. In NC House Bill 589, the General Assembly revised G.S. § 62-
15 133.8(h)(4) to lower the annual cost cap for the Residential customer class
16 from \$34.00 to \$27.00 in years subsequent to 2014, for cost recovery
17 proceedings initiated on or after July 1, 2017. Accordingly, the Company has
18 applied that revision to the cost caps in this cost recovery proceeding. As
19 shown in Williams Exhibit No. 4, the annual charge for each customer class,
20 including regulatory fee, is below the per-account cap as defined in N.C. Gen.
21 Stat. § 62-133.8.

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

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

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

5 A. The Company proposes the following monthly REPS charges to be effective
6 December 1, 2018. All amounts below include the regulatory fee.

Customer class	Proposed monthly REPS rider	Proposed annual REPS charge	Annual per account cost cap
Residential	\$ 1.42	\$ 17.04	\$ 27.00
General	\$ 7.96	\$ 95.52	\$150.00
Industrial	\$ 73.17	\$ 878.04	\$ 1,000.00

7

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

10 A. The following tables show the proposed monthly REPS rider charges, and a
11 comparison to the monthly REPS rider charges currently in effect – with and
12 without the regulatory fee applied.

13 *Excluding regulatory fee:*

Customer class	Proposed REPS rider	REPS rider in effect through November 30, 2018	Proposed increase
	(a)	(b)	(a) – (b)
Residential	\$ 1.42	\$ 0.55	\$ 0.87
General	\$ 7.95	\$ 6.41	\$ 1.54
Industrial	\$ 73.07	\$ 58.63	\$ 14.44

14

15 *Including regulatory fee:*

Customer class	Proposed REPS rider	REPS rider in effect through November 30, 2018	Proposed increase
	(a)	(b)	(a) – (b)
Residential	\$ 1.42	\$ 0.55	\$ 0.87
General	\$ 7.96	\$ 6.42	\$ 1.54
Industrial	\$ 73.17	\$ 58.71	\$ 14.46

1 **Q. PLEASE DESCRIBE THE EEC INVENTORY DETAILS PRESENTED**
2 **IN WILLIAMS EXHIBIT NO. 5.**

3 A. Williams Exhibit No. 5 shows a reconciliation of the Company's EEC
4 inventory balance available for REPS compliance as of December 31, 2017,
5 as well as references to the evaluation, measurement and verification
6 ("EM&V") reports the results of which are incorporated into current EEC
7 balances. The Company annually determines the level of EECs generated and
8 available for REPS compliance, and this update includes the results of any
9 periodic EM&V performed to-date, adjustments identified in the course of the
10 Company's ongoing analysis of energy efficiency program effectiveness, as
11 well as any other corrections. In compliance with the Commission's January
12 17, 2017 *Order Approving REPS and REPS EMF Rider and REPS*
13 *Compliance Report* in the Duke Energy Progress REPS Docket No. E-2, Sub
14 1109, the Company's EEC inventory includes only savings generated as
15 limited by the life of the respective measure or program, as established in
16 DEP's energy efficiency proceedings held pursuant to G.S. § 62-133.9. The
17 updated cumulative level of EECs generated to date is compared to the
18 number of EECs previously reported for compliance, less any EECs used for
19 compliance, to determine the EECs to be added to inventory in the North
20 Carolina Renewable Energy Certificate Tracking System for the most recent
21 calendar year. Williams Exhibit No. 5 shows the calculation of EECs added
22 to inventory for 2017, including details of the adjustments incorporated
23 therein.

- 1 Q. DOES THIS CONCLUDE YOUR TESTIMONY?
- 2 A. Yes.

1 MS. FENTRESS: We would also move that the
2 direct testimony of Megan Jennings also filed June 20,
3 2018, consisting of 29 pages be entered into the
4 record as if given orally from the stand, and that her
5 Exhibits 1 through 10 be admitted as evidence.

6 COMMISSIONER CLODFELTER: Without objection,
7 it will be so ordered, and including again the
8 confidentiality designations.

9 MS. FENTRESS: That's correct. Thank you.

10 (WHEREUPON, Jennings Exhibit 1,
11 including confidential pages 3, 6,
12 7 and Confidential Appendix 1
13 attached thereto; Jennings
14 Confidential Exhibit 2, Jennings
15 Confidential Exhibit 3, Jennings
16 Exhibits 4 and 5; Jennings
17 Confidential Exhibits 6 and 7;
18 Jennings Exhibit 8; and Jennings
19 Confidential Exhibits 9 and 10 are
20 admitted into evidence.)

21 (WHEREUPON, the prefiled direct
22 testimony of MEGAN W. JENNINGS is
23 copied into the record as if given
24 orally from the stand.)

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-2, SUB 1175

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
MEGAN W. JENNINGS**

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

2 A. My name is Megan W. Jennings, and my business address is 400 South
3 Tryon 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 Renewable Compliance Manager, I am responsible for
7 the development and implementation of renewable energy compliance
8 strategies for Duke Energy Progress, LLC (“Duke Energy Progress,”
9 “DEP” or “the Company”), Duke Energy Carolinas, LLC (“DEC”) and
10 Duke Energy Ohio, LLC. My responsibilities include compliance with
11 renewable energy portfolio standard requirements and evaluation of
12 renewable generation initiatives and customer programs.

13 **Q. PLEASE BRIEFLY SUMMARIZE YOUR EDUCATIONAL**
14 **BACKGROUND.**

15 A. I received a Bachelor of Science degree in Mathematical Sciences from
16 Clemson University and a Masters of Financial Mathematics from North
17 Carolina State University.

18 **Q. PLEASE DESCRIBE YOUR BUSINESS BACKGROUND AND**
19 **EXPERIENCE.**

20 A. I joined Progress Energy, Inc. in 2008, where I held positions in Investor
21 Relations and Regulatory Planning. Following the merger of Progress
22 Energy, Inc. with Duke Energy Corporation, I worked in the Rates and
23 Regulatory Strategy Department until June of 2015, when I moved to my

1 current position as Renewable Compliance Manager in the Distributed
2 Energy Technology Department.

3 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE NORTH**
4 **CAROLINA UTILITIES COMMISSION?**

5 A. Yes, I most recently provided testimony in Docket No. E-7, Sub 1162 on
6 DEC's 2017 REPS compliance report and application for approval of its
7 REPS cost recovery rider and in Docket No. E-2, Sub 1144 on DEP's
8 2016 REPS compliance report and application for approval of its REPS
9 cost recovery rider.

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

11 A. The purpose of my testimony is to describe Duke Energy Progress'
12 activities and the costs it has incurred, or will incur, in support of
13 compliance with North Carolina's Renewable Energy and Energy
14 Efficiency Portfolio Standard ("REPS") under N.C. Gen. Stat. ("G.S.") §
15 62-133.8 during the twelve months beginning on April 1, 2017 and ending
16 on March 31, 2018 ("Test Period"), as well as during the twelve months
17 beginning on December 1, 2018 and ending on November 30, 2019
18 ("Billing Period").

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

20 A. My testimony includes ten exhibits: Jennings Confidential Exhibit No. 1 is
21 the Company's 2017 REPS Compliance Report, and Jennings Confidential
22 Exhibit No. 2 provides actual and forecasted REPS compliance costs, by
23 resource, that the Company has incurred during the Test Period and

1 projects to incur during the Billing Period in support of compliance with
2 REPS. Jennings Confidential Exhibit No. 3 is a worksheet detailing the
3 other incremental costs included in this filing, listing separately labor and
4 non-labor costs, as directed by the Commission in its order in Docket No.
5 E-2, Sub 1109 (“2015 DEP REPS Compliance Order”). This exhibit does
6 not include specific costs related to interconnection activities; they have
7 been omitted per the NCUC’s order on January 17, 2017 in Docket E-2,
8 Sub 1109. Jennings Exhibit Nos. 4-10 are the results of studies the costs of
9 which the Company is recovering via the REPS Rider.

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

12 A. Jennings Confidential Exhibit Nos. 1-3 were prepared by me or under my
13 supervision. Jennings Exhibit Nos. 4-10 include the results of studies not
14 prepared under my supervision. However, in my role at Duke Energy, I
15 am familiar with the studies.

16 **Compliance with REPS Requirements**

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

19 A. Pursuant to G.S. § 62-133.8,¹ as an electric power supplier, Duke Energy
20 Progress is required to comply with the overall REPS requirement (“Total
21 Requirement”) by submitting for retirement a total volume of renewable

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 energy certificates (“RECs”) equivalent to the following percentages of its
2 North Carolina retail sales in the prior year:

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

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

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

- 19 ▪ Beginning in 2010, two-hundredths of one percent (0.02%);
- 20 ▪ In 2012, seven-hundredths of one percent (0.07%);
- 21 ▪ In 2015, fourteen-hundredths of one percent (0.14%); and
- 22 ▪ In 2018 and thereafter, two-tenths of one percent (0.2%).

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

- 7 ▪ In 2018, its pro-rata share of seven-hundredths of one percent
8 (0.07%) of the total retail electric power sold in North Carolina in
9 the year prior;
- 10 ▪ In 2020, its pro-rata share of fourteen-hundredths of one percent
11 (0.14%) of total retail electric power sold in North Carolina in the
12 year prior; and
- 13 ▪ In 2023 and thereafter, its pro-rata share of two-tenths of one
14 percent (0.2%) of total retail electric power sold in North Carolina
15 in the year prior.

16 Finally, each electric power supplier is also to submit for
17 retirement a volume of qualifying poultry waste RECs equivalent to its

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 16, 2017), and its *Errata Order* (December 15, 2017), Docket No. E-100, Sub 113, the Commission further delayed for one year the Swine Waste Set-Aside requirement; accordingly, the Swine Waste compliance requirements will now commence in compliance year 2018. The Commission also modified the 2017 Poultry Waste Set-Aside requirement to remain at the same level as the 2016 requirement, and delayed by one year the scheduled increases in the requirement.

1 pro-rata share of the aggregate state-wide poultry waste set-aside
2 requirement. Duke Energy Progress' Poultry Waste Set-Aside
3 requirements, as modified by the Commission, are as follows:

- 4 ▪ Beginning in 2014, its pro-rata share of 170,000 megawatt-hours
5 ("MWh");
- 6 ▪ In 2018, its pro-rata share of 700,000 MWh; and
- 7 ▪ In 2019 and thereafter, its pro-rata share of 900,000 MWh.

8 The requirements that are described in this testimony and
9 accompanying exhibits reflect the aggregation of the REPS requirements
10 of Duke Energy Progress' retail customers as well as those wholesale
11 customers, specifically the Town of Sharpsburg, the Town of
12 Stantonsburg, the Town of Lucama, the Town of Black Creek and the
13 Town of Winterville (collectively "Wholesale"), for which the Company
14 has been contracted to provide REPS services.

15 **Q. PLEASE DISCUSS DUKE ENERGY PROGRESS' REPS**
16 **REQUIREMENTS FOR THE TEST AND BILLING PERIODS.**

17 A. For the Test Period, the Company submitted for retirement 2,210,451
18 RECs, which included 16,358 Senate Bill 886 ("SB 886") RECs, each of
19 which counts for two poultry waste and one general REC, to meet its Total
20 Requirement of 2,243,167 RECs. Within this total, the Company
21 submitted for retirement 52,344 RECs to meet the Solar Set-Aside
22 requirement and 15,358 RECs, along with 16,358 SB 886 RECs (which
23 count as 32,716 Poultry Waste Set-Aside RECs), to meet the Poultry

1 Waste Set-Aside requirement. During the prospective Billing Period,
2 which spans two calendar years, with different requirements in each year,
3 the Company's estimated requirements are as follows⁴:

4 In 2018, the Company estimates that it will be required to submit
5 for retirement 3,682,990 RECs to meet its Total Requirement. Within this
6 total, the Company is also required to retire the following: 73,660 solar
7 RECs, 25,781 swine waste RECs and 197,318 poultry waste RECs.

8 In 2019, the Company estimates that it will be required to submit
9 for retirement 3,724,847 RECs to meet its Total Requirement. Within this
10 total, the Company estimates that it will be required to retire
11 approximately 74,497 solar RECs, 26,074 swine waste RECs and 253,695
12 poultry waste RECs.

13 **Q. HAS THE COMPANY COMPLIED WITH ITS GENERAL**
14 **REQUIREMENT FOR 2017?**

15 A. Yes, the Company has met its 2017 General Requirement of 2,142,749
16 RECs. Specifically, the RECs to be used for 2017 compliance have been
17 transferred from the North Carolina Renewable Energy Tracking System
18 ("NC-RETS") Progress Energy Electric Power Supplier account to the
19 Progress Energy Compliance Sub-Account and the Sub-Accounts of its
20 Wholesale customers. Upon completion of this regulatory proceeding, the
21 Commission will finalize retirement of the RECs.

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 **Q. WILL THE COMPANY COMPLY WITH ITS GENERAL REPS**
2 **REQUIREMENT IN 2018?**

3 A. Yes, the Company is well positioned to comply with its General REPS
4 Requirements in 2018.

5 **Q. WHAT ACTIONS HAS THE COMPANY TAKEN DURING THE**
6 **TEST PERIOD TO SATISFY ITS CURRENT AND FUTURE REPS**
7 **REQUIREMENTS?**

8 A. During the Test Period, Duke Energy Progress has continued to produce
9 and procure RECs to satisfy its REPS requirements. Specifically, the
10 Company has taken the following actions: (1) executed and continued
11 negotiations for additional REC purchase agreements with renewable
12 facilities; (2) solicited renewable energy proposals of various types; (3)
13 continued operations of its solar facilities; (4) enhanced and expanded
14 energy efficiency programs that will generate savings that can be counted
15 towards the Company's REPS requirement; and (5) performed research
16 studies, both directly and through strategic partnerships, to enhance the
17 Company's ability to comply with its future REPS requirements.

18 **Q. HOW WILL THE COMPETITIVE PROCUREMENT OF**
19 **RENEWABLE ENERGY ("CPRE") PROGRAM OF NORTH**
20 **CAROLINA HOUSE BILL 589 ("NC HB 589") IMPACT DEP'S**
21 **COMPLIANCE WITH ITS GENERAL REQUIREMENT?**

22 A. Under G.S. § 62-110.8(a), DEC and DEP (the "Companies") are
23 responsible for procuring renewable energy and capacity through a

1 competitive procurement program with the purpose of adding renewable
2 energy to the state's generation portfolio in a manner that allows DEC and
3 DEP to continue to reliably and cost-effectively serve their customers'
4 future energy needs. To meet the CPRE Program requirements, the
5 Companies must issue requests for proposals to procure energy and
6 capacity from renewable energy facilities in the aggregate amount of
7 2,660 MW (subject to adjustment in certain circumstances) reasonably
8 allocated over a term of 45 months beginning on February 21, 2018, when
9 the Commission approved the CPRE Program.

10 Renewable energy facilities eligible to participate in the CPRE
11 solicitation(s) include those facilities that use renewable energy resources
12 identified in G.S. § 62-133.8(a)(8), the REPS statute. The renewable
13 energy facilities to be developed or acquired by the Companies or
14 procured from a third party through a power purchase agreement under the
15 CPRE Program, must also deliver to the Companies the environmental and
16 renewable attributes, or RECs, associated with the power. The Company's
17 CPRE Program Guidelines, filed in Docket No. E-2, Sub 1159 on
18 November 27, 2017, include a planned allocation of the 2,660 MW
19 between the DEC and DEP service territories and a proposed timeline for
20 each solicitation. DEP plans to use the RECs acquired through the CPRE
21 RFP solicitations for its future REPS compliance requirements and has
22 therefore included the planned MW allocation and timeline in its REPS
23 compliance planning process. Because the Company will use the RECs

1 acquired through CPRE for REPS compliance, CPRE program
2 implementation costs could be recovered through the REPS Rider.
3 However, the Company has elected to recover the reasonable and prudent
4 costs incurred to implement the CPRE Program through the CPRE Rider
5 as contemplated under Commission Rule R8-71(j).

6 **Q. HAS THE COMPANY COMPLIED WITH ITS SOLAR SET-ASIDE**
7 **REQUIREMENT FOR 2017?**

8 A. Yes, the Company has met the 2017 Solar Set-Aside requirement of
9 52,344 solar RECs. Pursuant to the NC-RETS Operating Procedures, the
10 Company has submitted for retirement 52,344 solar RECs. Specifically,
11 the RECs to be used for 2017 compliance have been transferred from the
12 NC-RETS Progress Energy Electric Power Supplier account to the
13 Progress Energy Compliance Sub-Account and the Sub-Accounts of its
14 Wholesale customers. Upon completion of this regulatory proceeding, the
15 Commission will finalize retirement of the RECs.

16 **Q. WILL THE COMPANY COMPLY WITH ITS SOLAR SET-ASIDE**
17 **REQUIREMENT IN 2018?**

18 A. Yes, the Company is well positioned to comply with its Solar Set-Aside
19 requirement in 2018.

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

1 A. The Company is well positioned to comply with its Solar Set-Aside
2 Requirement in 2018 through a diverse and balanced portfolio of solar
3 resources. The Company's efforts to comply with the Solar Set-Aside
4 Requirement include REC generation and procurement from solar
5 renewable energy facilities.

6 **Q. HAS THE COMPANY COMPLIED WITH ITS POULTRY WASTE
7 SET-ASIDE REQUIREMENT FOR 2017?**

8 A. Yes, the Company has met the 2017 Poultry Waste requirement of
9 48,074 RECs. Pursuant to NC-RETS Operating Procedures, the Company
10 has submitted for retirement 15,358 poultry RECs and 16,358 SB 886
11 RECs (which count as 32,716 Poultry Waste Set-Aside
12 RECs). Accordingly, the Company has submitted the equivalent of 48,074
13 poultry RECs for compliance. Specifically, the RECs to be used for 2017
14 compliance have been transferred from the NC-RETS Progress Energy
15 Electric Power Supplier account to the Progress Energy Compliance Sub-
16 Account and the Sub-Accounts of its Wholesale customers. Upon
17 completion of this regulatory proceeding, the Commission will finalize
18 retirement of the RECs.

19 **Q. WILL THE COMPANY COMPLY WITH ITS POULTRY WASTE
20 SET-ASIDE REQUIREMENT IN 2018?**

21 A. The Company is in a position to comply with its poultry waste set-aside
22 requirement in 2018, though future compliance is dependent on the
23 performance of poultry waste-to-energy developers on current contracts.

1 Q. WHAT ACTIONS HAS THE COMPANY TAKEN DURING THE
2 TEST PERIOD TO PROCURE OR DEVELOP POULTRY WASTE-
3 TO-ENERGY RESOURCES TO SATISFY ITS POULTRY WASTE
4 SET-ASIDE REQUIREMENTS?

5 A. In the Test Period, the Company (1) continued direct negotiations for
6 additional supplies of both in-state and out-of-state resources with
7 multiple counterparties; (2) secured contracts for additional poultry waste-
8 to-energy resources; (3) worked diligently to understand the technological,
9 permitting, and operational risks associated with various methods of
10 producing qualifying poultry RECs to aid developers in overcoming those
11 risks; when those risks could not be overcome, the Company worked with
12 developers via contract amendments to adjust for more realistic outcomes;
13 (4) explored leveraging current biomass contracts by working with
14 developers to add poultry waste to their fuel mix; (5) explored adding
15 thermal capabilities to current poultry sites to bolster REC production; (6)
16 utilized the Company's REC trader to search the broker market for out-of-
17 state poultry RECs available in the market; (7) participated in the North
18 Carolina Energy Policy Council Biogas Working Group; and (8)
19 terminated non-performing contracts. Additional information on the
20 Company's compliance with the Poultry Waste Set-Aside requirement can
21 be found in the Company's Joint Semiannual Progress Report, filed on
22 May 31, 2018 in Docket No. E-100, 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. WILL THE COMPANY COMPLY WITH ITS SWINE WASTE**
5 **SET-ASIDE REQUIREMENT IN 2018?**

6 A. The Company projects that it will not comply with its Swine Waste Set-
7 Aside in 2018. The Company's ability to meet its Swine Waste Set-Aside
8 is adversely impacted by the performance of swine waste-to-energy
9 developers on current contracts and delays in swine waste-to-energy
10 developers becoming commercially operational on new contracts with the
11 Company. The Company understands that current swine waste-to-energy
12 projects have encountered difficulties in achieving the full REC output of
13 their contracts due to the inability to secure firm and reliable sources of
14 swine waste feedstock from waste producers in North Carolina, difficulties
15 securing project financing and technological challenges encountered when
16 ramping up production.

17 The Company notes that its good-faith efforts to comply with the
18 swine waste set-aside now include, however, the first swine-derived
19 biogas project in North Carolina, Optima KV. Optima KV successfully
20 interconnected with Piedmont Natural Gas in March 2018 and is sending
21 biogas to DEP's Smith Energy Complex where swine RECs are generated.

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

1 **ENERGY RESOURCES TO MEET ITS SWINE WASTE SET-**
2 **ASIDE REQUIREMENTS?**

3 A. In the Test Period, the Company (1) issued a Request for Proposals for
4 swine waste fueled proposals, soliciting up to 750,000 MMBtu of swine
5 waste fueled biogas, or the equivalent in MWh, which is approximately
6 110,000 MWh, of electric power fueled by swine waste; (2) continued
7 direct negotiations for additional supplies of both in-state and out-of-state
8 resources; (3) secured contracts for additional swine waste-to-energy
9 resources; (4) worked diligently to understand the technological,
10 permitting, and operational risks associated with various methods of
11 producing qualifying swine waste RECs to aid developers in overcoming
12 those risks; when those risks could not be overcome, the Company worked
13 with developers via contract amendments to adjust for outcomes that the
14 developers believe are achievable based on new experience; (5) explored
15 and is engaging in modification of current biomass and set-asides
16 contracts by working with developers to add swine waste to their fuel mix;
17 (6) actively negotiated contracts for the ability to generate RECs from
18 swine-derived directed biogas at the H.F. Lee, Smith or Sutton combined
19 cycle plants for combustion and generation of zero emission renewable
20 electricity; (7) utilized the Company's REC trader to search the broker
21 market for out-of-state swine RECs available in the market; (8)
22 participated in the North Carolina Energy Policy Council Biogas Working
23 Group; (9) engaged the North Carolina Pork Council ("NCPC") in a

1 project evaluation collaboration effort that will allow the Company and the
2 NCPC to discuss project viability, as appropriate, with respect to the
3 Company's obligations to keep certain sensitive commercial information
4 confidential; and (10) terminated non-performing contracts. Additional
5 information on the Company's compliance with the Swine Waste Set-
6 Aside requirement can be found in the Company's Joint Semiannual
7 Progress Report, filed on May 31, 2018 in Docket No. E-100, Sub 113A.

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

11 **Q. IS DUKE ENERGY PROGRESS CONTINUING TO EXECUTE**
12 **ADDITIONAL REC PURCHASE AGREEMENTS?**

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

16 **Q. DID THE COMPANY SELL ANY RECS DURING THE TEST**
17 **PERIOD?**

18 A. No, it did not.

19 **Costs of REPS Compliance**

20 **Q. WHAT ARE THE COMPANY'S COSTS ASSOCIATED WITH**
21 **REPS COMPLIANCE DURING THIS TEST PERIOD AND THE**
22 **UPCOMING BILLING PERIOD?**

1 A. Duke Energy Progress' costs associated with REPS compliance are
2 reflected in Jennings Confidential Exhibit No. 2 and are categorized by
3 actual costs incurred during the Test Period and projected costs for the
4 Billing Period.

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

8 A. Jennings Confidential Exhibit No. 2 identifies "Other Incremental Costs"
9 and "Research" that the Company has incurred in association with REPS
10 compliance.

11 **Other Incremental Costs and Solar Rebate Program Costs**

12 **Q. PLEASE EXPLAIN THE OTHER INCREMENTAL COSTS
13 INCLUDED FOR RECOVERY.**

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

21 **Q. PLEASE PROVIDE INFORMATION ON THE NC HB 589 SOLAR
22 REBATE PROGRAM.**

1 A. As required by G.S. § 62-155(f), DEC and DEP filed an application with
2 the NCUC, in Docket Nos. E-7, Sub 1166 and E-2, Sub 1167, requesting
3 approval of a Solar Rebate Program offering reasonable incentives to
4 residential and nonresidential customers for the installation of small
5 customer owned or leased solar energy facilities participating in the
6 Company's net metering tariff. The incentive is limited to 10 kilowatts
7 alternating current ("kW AC") for residential solar installations and 100
8 kW AC for nonresidential solar installations. The program incentive shall
9 be limited to 10,000 kW of installed capacity annually starting January 1,
10 2018 and continuing until December 31, 2022. Under NC HB 589, DEP
11 shall be authorized to recover all reasonable and prudent costs of
12 incentives provided to customers and program administrative costs
13 through the REPS Rider.

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

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

1 public utility pursuant to G.S. § 62-133.8(h).” G.S. § 62-133.8(h) provides
2 for an electric power supplier’s cost recovery and customer charges under
3 the REPS statute; NC HB 589 amended it by adding a provision to allow
4 for the recovery of incremental costs incurred to “provide incentives to
5 customers, including program costs, incurred pursuant to G.S. § 62-
6 155(f).” Therefore, DEP has included for recovery in this filing costs
7 projected to be incurred in the Billing Period related to the implementation
8 of the NC HB 589 Solar Rebate Program. As detailed on Jennings
9 Confidential Exhibit No. 3, these costs include the annual amortization of
10 incentives paid to customers, return on the unamortized balance, and
11 program administration costs, including labor, information technology and
12 marketing costs.

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

16 A. The NC HB 589 Solar Rebate Program is anticipated to launch in July
17 2018 with the first rebate payments occurring in August 2018. Even
18 though the rebate payments are not projected to start until August 2018,
19 DEP anticipates the program to be fully subscribed in 2018 with payments
20 for the full annual limit of 10,000 kW. In 2019, the rebate payments are
21 projected to be made ratably throughout the year. Also included in non-
22 labor costs are program marketing costs and information technology costs
23 for the automation of program administrative tasks.

1 **Q. PLEASE PROVIDE DETAIL ON THE INTERNAL LABOR COSTS**
2 **ASSOCIATED WITH THE NC HB 589 SOLAR REBATE**
3 **PROGRAM.**

4 A. The labor dollars related to the NC HB 589 Solar Rebate Program
5 included for recovery in this filing include projected costs for one Program
6 Manager, two Program Specialists and two complex billing staff. The
7 Program Manager will be responsible for marketing, installer
8 communications, reporting and overseeing the Program Specialists, who
9 will be responsible for processing applications, initiating incentive
10 payments and handling customer inquiries. In addition, incremental
11 employees are needed in complex billing as the number of net metering
12 accounts is expected to increase as a result of the NC HB 589 Solar Rebate
13 Program.

14 **Q. PLEASE PROVIDE DETAIL ON THE INTERNAL LABOR COSTS**
15 **THAT ARE ASSOCIATED WITH REPS COMPLIANCE AND**
16 **SOLAR REBATE ACTIVITIES THAT ARE INCLUDED IN DEP'S**
17 **CURRENT APPLICATION FOR REPS COST RECOVERY.**

18 A. DEP charges only the incremental cost of REPS compliance and the NC
19 HB 589 Solar Rebate Program to the REPS cost recovery rider. Consistent
20 with that policy and DEP's practices in previous applications for cost
21 recovery for REPS compliance, internal employees who work to comply
22 with G.S. § 62-133.8 and G.S. § 62-155(f) charge only that portion of their

1 labor to REPS. The departments/functions that charged labor to REPS
2 during the Test Period are detailed in Jennings Confidential Exhibit No. 3.

3 **Q. HOW DO EMPLOYEES CHARGE THEIR REPS-RELATED AND**
4 **NC HB 589 SOLAR REBATE PROGRAM-RELATED LABOR**
5 **COSTS TO REPS?**

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

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

18 **Q. ARE THERE ANY LABOR AND NON-LABOR**
19 **INTERCONNECTION-RELATED COSTS INCLUDED FOR**
20 **RECOVERY IN THIS FILING?**

21 A. No. As directed by the NCUC in the *2015 DEP REPS Compliance Order*,
22 all internal interconnection-related labor costs, such as those related to
23 employees in the Distributed Energy Technology Standard PPAs and

1 Interconnection Team and the Renewables Service Center, contract labor
2 costs, such as those for temporary employees working on interconnection
3 information technology projects, and non-labor costs, such as PowerClerk
4 platform costs, have not been included for recovery in this filing.

5 **Research Costs**

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

11 **Q. THE COMMISSION’S ORDER APPROVING REPS AND REPS**
12 **EMF RIDERS AND 2012 REPS COMPLIANCE REQUIRES DUKE**
13 **ENERGY PROGRESS TO FILE WITH ITS 2017 REPS RIDER**
14 **APPLICATION STUDY RESULTS FOR ANY STUDIES THE**
15 **COSTS OF WHICH IT HAS RECOVERED VIA THE REPS**
16 **RIDER. IS THE COMPANY SUPPLYING SUCH STUDIES IN**
17 **THIS FILING?**

18 **A.** Yes. The Company’s R&D efforts are an integral part of its REPS
19 compliance efforts. The following summary outlines efforts undertaken by
20 the Company in the test period and specifies the availability of applicable
21 study results.

- 22 • CAPER, PV Synchronous Generator (“PVSG”) – In 2017, the
23 Company worked with North Carolina State University (“NC

1 State”) and Clemson University, through the Center for Advanced
2 Power Engineering Research (“CAPER”), on a project to develop
3 and demonstrate a 40 kW PVSG system. The results of this project
4 can be found in Jennings Exhibit No. 4. This project will continue
5 in 2018.

6 • CAPER, Distributed Generation Valuation – In 2017, the
7 Company worked with NC State and the University of North
8 Carolina at Charlotte (“UNCC”), through CAPER, on a project to
9 properly value the distributed generation in relation to its impacts
10 on the grid, and to determine best practices for the southeast
11 region. The first phase of the project aims to review recently
12 conducted studies on the value of distributed generation. The phase
13 one results can be found in Jennings Exhibit No. 5. This project
14 will continue in 2018.

15 • Coalition for Renewable Natural Gas – the Company joined the
16 Coalition for Renewable Natural Gas in 2017 to add a valuable
17 resource of knowledge and public policy advocacy in this
18 growing sector of potential animal waste supply. The Coalition for
19 Renewable Natural Gas provides its members with exclusive
20 whitepapers, support on model pipeline gas specifications and
21 access to other members for discussions on current and future
22 projects.

- 1 • eLab – Rocky Mountain Institute (“RMI”) – The Company
2 participates in eLab, a forum sponsored by RMI, composed of a
3 number of North Carolina and nationally based entities, and
4 organized to overcome barriers to economic deployment of
5 distributed energy resources in the U.S. electric sector.
6 Specifically, the Company seeks to gauge customer desires related
7 to distributed resources and provide ideas of potential long-term
8 solutions for distributed energy resources and microgrids. Please
9 visit RMI’s website at <http://www.rmi.org/elab> for more
10 information on eLab.
- 11 • Electric Power Research Institute (“EPRI”) – In 2017, the
12 Company subscribed to the following EPRI programs, the costs of
13 which were recovered via the REPS rider: Program 193 –
14 Renewable Generation, which includes Program PS193C – Solar.
15 EPRI designates such study results as proprietary or as trade
16 secrets and licenses such results to EPRI members,
17 including Duke Energy Progress. As such, the Company may not
18 disclose the information publicly. Non-members may access these
19 studies for a fee. Information regarding access to this information
20 can be found at <http://www.epri.com/Pages/Default.aspx>.
- 21 • Eos Energy Storage Technology Demonstration – The company
22 and Eos Services started a collaborative technology development
23 program to validate, demonstrate, and quantify the benefits of an

- 1 Eos Aurora Battery System that is DC Coupled to a PV facility at
2 the McAlpine Creek Substation 50 kW Solar Facility. The
3 expected completion date of the project is the end of 2019.
- 4 • NC State University's Future Renewable Electric Energy Delivery
5 and Management ("FREEDM") Systems Center – Duke Energy
6 supports NC State's FREEDM Center through annual membership
7 dues. The FREEDM partnership provides Duke Energy with the
8 ability to influence and focus research on materials, technology,
9 and products that will enable the utility industry to transform the
10 electric grid into a two-way power flow system supporting
11 distributed generation.
 - 12 • Institute for Electrical and Electronics Engineers ("IEEE") 1547
13 Conformity Assessment – The IEEE 1547 Conformity Assessment
14 Steering Committee has been working to develop industry standard
15 tools and methodologies to assure consistent and comprehensive
16 compliance prior to utility grid interconnection sign off. IEEE and
17 the Company share a common goal to accelerate and broaden
18 industry adoption through the development and publication of
19 well-designed and managed conformity assessment and
20 certification programs. This project was about establishment and
21 execution of an IEEE 1547 Commissioning Test demonstration for
22 solar installations within the eGRID laboratory located at Clemson
23 University. The project formally commissioned the operation of a

1 50kW inverter and established an operational test bed for more
2 advanced interconnection evaluation. The results of this project
3 can be found in Jennings Confidential Exhibit No. 6.

4 • Distributed Energy Resource – Islanding Detection and Control
5 (“DER-IDC”) – There is growing consensus in the industry that as
6 DER grows in its penetration levels, the effectiveness of anti-
7 islanding schemes currently in use in inverters and protective
8 relaying schemes will degrade, and that future schemes will likely
9 need to involve some sort of communications. This sentiment has
10 been discussed multiple times at recent IEEE working group
11 meetings, at which the Company is an active participant. To that
12 end, DEP engaged in an initial study to look at wide-scale
13 communications methods that could be used to solve this growing
14 concern. DEP contracted with Northern Plains Power Technologies
15 (“NPPT”), an engineering consulting firm, to study data collected
16 from Duke Energy facilities and research potential algorithms and
17 communications methods that would be effective for
18 communications-based IDC methods. In 2017, NPPT evaluated the
19 technical challenges of the identified islanding detection method,
20 and presented the feasible alternatives. The results of the study can
21 be found in Jennings Confidential Exhibit No. 7. In addition, DEP
22 contracted with Green Energy Corp. who developed the data
23 translator for local access and filtering of streaming Phasor

- 1 Measurement Unit data at distribution measurement equipment
2 back to a phasor data concentrator in the back-office. A status
3 report for this project can be found in Jennings Exhibit No. 8.
- 4 • Marshall Solar Site Algorithm – In 2017, the Company worked
5 with UNCC on a project to utilize the operational data to design
6 and implement an autonomous active and reactive power dispatch
7 algorithm with PV farms and/or Battery Energy Storage system on
8 any feeder considering DMS coordination. The results of this
9 project can be found in Jennings Confidential Exhibit No. 9.
 - 10 • Mini-DVAR Project – In 2016, the Company started a project to
11 investigate a new technology manufactured by American
12 Superconductor Corporation which makes a device called Mini-
13 DVAR. This device can potentially be used for voltage
14 stability/VAR support for renewable energy applications such as
15 voltage compliance, grid reliability, efficiency, energy savings and
16 grid integration of distributed PV. The project also included
17 engineering design of a protection scheme with Schweitzer
18 Engineering Laboratories, and the procurement of switch gear
19 from ABB. In 2017, the Company completed the following tasks
20 of the project: (1) power quality meter installation for base line
21 data collection; (2) design and implementation of the direct
22 transfer trip for the mini-DVAR device; (3) mini-DVAR device
23 field installation and commissioning; and (4) test run of the mini-

1 DVAR to verify it's fully functional. This project will continue in
2 2018.

3 • Swine Extrusion/Poultry Mortality – The Animal and Poultry
4 Waste Management Center (“APWMC”) at NC State University –
5 In 2017, the Company began support of the various projects being
6 undertaken by the APWMC. The initial work is centered around
7 drying swine lagoon solids and poultry mortalities at a farm-based
8 level to create a higher MMBtu fuel that can be safely and easily
9 transported to a central plant for combustion. A detailed
10 description of the project along with future testing plans can be
11 found in Jennings Confidential Exhibit No. 10.

12 **Q. ARE YOU SATISFIED THAT THE ACTUAL COSTS INCURRED**
13 **IN THE TEST PERIOD HAVE BEEN, AND THAT THE**
14 **PROJECTED COSTS OF THE BILLING PERIOD WILL BE,**
15 **PRUDENTLY INCURRED?**

16 A. Yes. Duke Energy Progress believes it has incurred and projects to incur
17 all of these costs associated with REPS compliance in a prudent manner.
18 The Company continues to exercise thorough and rigorous technical and
19 economic analysis to evaluate all options for compliance with its REPS
20 requirements. Duke Energy Progress has developed strong foundational
21 market knowledge related to renewable resources. The Company
22 continues to enhance and develop expertise in this field through the
23 Company's various solicitations for renewable energy and the operation of

1 its unsolicited bid process, its participation in industry research, and daily
2 interaction with developers of renewable energy facilities. As a result of
3 these efforts, the Company has been able to identify, procure, and develop
4 a diverse portfolio of renewable resources to meet its REPS requirements
5 in a prudent, reasonable and cost-effective manner.

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

7 **A. Yes.**

1 MS. FENTRESS: And, finally, I would move
2 that the Company's Application also filed June 20,
3 2018, in this docket be admitted as evidence into the
4 record.

5 COMMISSIONER CLODFELTER: It will be so
6 ordered.

7 MS. FENTRESS: Thank you.

8 (WHEREUPON, Application of Duke
9 Energy Progress, LLC, is admitted
10 into evidence.)

11 MS. FENTRESS: That is all from the Company.

12 COMMISSIONER CLODFELTER: Okay. Fine.

13 Mr. Dodge.

14 MR. DODGE: Commissioner Clodfelter, the
15 Public Staff requests that the prefiled affidavit of
16 Public Staff Witness Jay Lucas consisting of six pages
17 and a one-page appendix, and the affidavit of Michelle
18 Boswell consisting of four pages and a two-page
19 appendix also be entered into the evidence as if given
20 orally from the stand.

21 COMMISSIONER CLODFELTER: Any objection from
22 any party? If not, the motion will be granted and
23 those will be admitted into evidence.

24 (WHEREUPON, the prefiled affidavit

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

and Appendix A of JAY B. LUCAS is
copied into the record as if given
orally from the stand.)

DOCKET NO. E-2, SUB 1175

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

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

AFFIDAVIT
OF
JAY B. LUCAS

STATE OF NORTH CAROLINA
COUNTY OF WAKE

I, Jay B. Lucas, 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 20, 2018, and on the proposed REPS cost recovery rider filed by the Company on the same day. 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.

06
OFFICIAL COPY

Aug 29 2018

OFFICIAL COPY

Oct 05 2018

REPS COMPLIANCE REPORT

DEP is legally obligated to acquire renewable energy certificates (RECs) in accordance with N.C. Gen. Stat. § 62-133.8, and has been contractually required to provide REPS compliance services, including reporting services, for the following wholesale customers: the Town of Black Creek, the Town of Lucama, the Town of Sharpsburg, the Town of Stantonsburg, and the Town of Winterville (collectively, the Wholesale Customers). The filings by DEP in this docket include the REPS requirements of these Wholesale Customers. DEP will no longer provide any REPS compliance services to the Wholesale Customers as of January 1, 2018.

For 2017 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 6% of the 2016 North Carolina retail electricity sales of itself and the Wholesale Customers. As part of the 6%, DEP needed to pursue retirement of sufficient solar RECs to match 0.14% of retail sales in 2016 (solar set-aside), and sufficient poultry waste RECs to match their pro-rata share of the 170,000 poultry waste RECs required by N.C. Gen. Stat. § 62-133.8(f), for itself and the Wholesale Customers. This total number of poultry waste RECs was determined by the Commission in its October 16, 2017, *Order Modifying the Swine and Poultry Waste Set-Aside Requirements and Providing Other Relief* in Docket No. E-100, Sub 113 (October 16 Order). The October 16

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 2017.

Order also delayed the swine waste REC requirement under N.C. Gen. Stat. § 62-133.8(e) for one additional year.

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) for both DEP and the Wholesale Customers. Accordingly, the Public Staff recommends that the Commission approve DEP's 2017 REPS Compliance Report.

EFFECT OF EECS ON REPS COMPLIANCE

In the DEP REPS cost recovery case for 2017 (Docket No. E-2, Sub 1144), the Public Staff filed the affidavit of witness Jay B. Lucas on September 5, 2017. This affidavit, in part, presented a revised method of allocating credit for EECS between DEP's three customer classes and separating the value of general RECs from other REPS costs such as set-asides, research and development, and administrative costs. Ordering Paragraph No. 8 of the Commission's November 17, 2017, *Order Approving REPS and REPS EMF Rider and Approving REPS Compliance Report*, required the following:

8. That DEP and the Public Staff shall together evaluate the inputs and methods used for the allocation of EE RECs by class, as well as the allocation of the of set-aside and general requirement cost categories to customer class, and identify any further revisions required. DEP and the Public Staff shall file the results of this analysis no later than April 1, 2018, for use in the 2018 DEP REPS rider.

The Public Staff requested an extension until April 16, 2018, to file the analysis results, which the Commission granted on April 10, 2018. On April 12, 2018, DEP and the Public Staff filed the joint report as required, recommending that the Commission: (1) accept the methodology agreed to by DEP and the Public Staff to allocate the set-aside and general requirement cost categories to each customer class and (2) accept DEP's method of using actual relative contributions of EE RECs supplied by each customer class, both of which are used to allocate EEC credit for REPS compliance purposes.

The Public Staff has reviewed the methodology used by DEP in this proceeding and agrees that it appears to allocate credit for EECs between DEP's three customer classes consistent with the methodology agreed to by the Public Staff and DEP in the April 12, 2018, joint report.

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, 2018 through November 30, 2019). The Experience Modification Factor (EMF) is based on the incremental costs in the EMF period (April 1, 2017 through March 31, 2018) 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. 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 the regulatory fee factor of 1.001402.

In its filing on June 20, 2018, 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	\$ 1.30	\$ 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

The Public Staff has reviewed the costs that produce the above proposed rates and takes no issue with them. Accordingly, the Public Staff recommends approval of DEP's proposed REPS rider for residential, general service, and industrial customers as filed on that date.

For comparison, the table below provides the existing monthly EMF and REPS billing components approved in Docket No. E-2, Sub 1144, on November 17, 2017.

Customer Class	REPS Rider	EMF	Total	Total Including Regulatory Fee
Residential	\$ 1.08	(\$ 0.53)	\$ 0.55	\$ 0.55
General Service	\$ 8.04	(\$ 1.63)	\$ 6.41	\$ 6.42
Industrial	\$ 56.73	\$ 1.90	\$ 58.63	\$ 58.71

This completes my affidavit.


Jay B. Lucas

Sworn to and subscribed before me
this the 29th day of August, 2018.


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

Jay B. Lucas

I graduated from the Virginia Military Institute in 1985, earning a Bachelor of Science Degree in Civil Engineering. Afterwards, I served for four years as an officer in the U. S. Air Force performing many civil and environmental engineering tasks. I left the Air Force in 1989 and attended the Virginia Polytechnic Institute and State University (Virginia Tech), earning a Master of Science degree in Environmental Engineering. After completing my graduate degree, I worked for an engineering consulting firm and worked for the North Carolina Department of Environmental Quality in its water quality programs. Since joining the Public Staff in January 2000, I have worked on utility cost recovery, renewable energy program management, customer complaints, and other aspects of utility regulation. I am a licensed Professional Engineer in North Carolina.

Aug 29 2018

OFFICIAL COPY

Oct 05 2018

OFFICIAL COPY

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

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

DOCKET NO. E-2, SUB 1175

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.

OFFICIAL COPY

OFFICIAL COPY

AUG 29 2018

OCT 05 2018

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 2017 through March 2018 (REPS EMF period or test period).

On June 20, 2018, DEP filed its application, testimony, and exhibits related to the incremental costs incurred for compliance with the REPS. Williams Exhibit No. 4 sets forth the proposed annual and monthly EMF increment or decrement riders for each of the North Carolina retail customer classes. The proposed annual EMF increment/(decrement) riders, excluding the North Carolina regulatory fee, for the residential, general, and industrial customers, respectively, are \$1.47, \$(7.88), and \$97.35 per retail customer account. These rates are calculated by dividing the "Total EMF Costs/(Credits)" amount, as shown on Williams Exhibit No. 4 for each customer class, by the "Total Projected Number of Accounts – DEP NC Retail" for that class. The proposed monthly EMF increment/(decrement) riders, excluding the regulatory fee, for residential, general, and industrial customers, respectively, are \$0.12, \$(0.66), and \$8.11 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.

Pursuant to the Commission's November 17, 2017, *Order Approving REPS and REPS EMF Rider and Approving REPS Compliance Report*, in Docket No. E-2, Sub 1144, the Commission ordered the Public Staff and the Company to work together to evaluate "the inputs and revised methods for the allocation of EE RECs by class, as well as the allocation of the set-aside and general requirement cost categories to customer class" to identify any appropriate revisions that provided a more accurate calculation of the cost allocations to each customer class in future proceedings. On April 12, 2018, the Public Staff and the Company filed a Joint Report with the Commission in Docket No. E-2, Sub 1144 setting forth its findings. This Joint Report indicated that DEP will be able to calculate updated values for energy efficiency (EE) savings contributed by each customer class over the prior year which will allow for truing up the allocation as needed in the REPs EMF, as well as for the use of updated values in the billing period going forward. The Public Staff agreed with DEP's use of these updated values. Based on the Public Staff's review in this case, there are no adjustments to the EECs by customer class.

OFFICIAL COPY

AUG 29 2018

OFFICIAL COPY

OCT 05 2018

As a result of the Public Staff's investigation, I am recommending that DEP's 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 \$1.47, \$(7.88), and \$97.35, and monthly increment/(decrement) REPS EMF riders of \$0.12, \$(0.66), and \$8.11, per customer account, excluding the regulatory fee, for residential, general, and industrial customers, respectively.

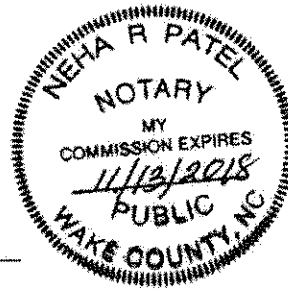
This completes my affidavit.

Michelle Boswell
Michelle Boswell

Sworn to and subscribed before me
this the 29 day of AUGUST, 2018.

Neha R. Patel
Neha R. Patel
Notary Public

My Commission Expires: 11/13/2018



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 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 2010 REPS Cost Recovery Rider for Duke Energy Carolinas, LLC (DEC); 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; 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 (DENC, formerly Dominion North Carolina Power), Duke Energy Progress LLC 2013 and 2017 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).

OFFICIAL COPY

AUG 29 2018

OFFICIAL COPY

OCT 05 2018

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.

OFFICIAL COPY

AUG 29 2018

OFFICIAL COPY

OCT 05 2018

1 COMMISSIONER CLODFELTER: Anything further,
2 Mr. Dodge?

3 MR. DODGE: Nothing further. Thank you.

4 MS. FENTRESS: (Shakes head no)

5 COMMISSIONER CLODFELTER: Anything from the
6 intervenors?

7 MR. PAGE: No.

8 MR. SMITH: (Shakes head no)

9 COMMISSIONER CLODFELTER: Anything else we
10 need to address in the record?

11 MS. FENTRESS: (Shakes head no)

12 COMMISSIONER CLODFELTER: Same 30-day
13 proposed order as in the prior docket; is that
14 agreeable?

15 MR. DODGE: Yes, sir.

16 MS. FENTRESS: It is agreeable to the
17 Company.

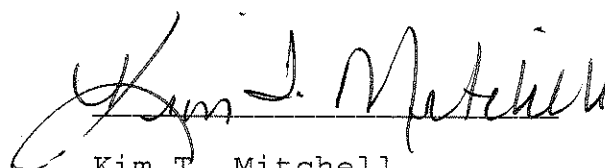
18 COMMISSIONER CLODFELTER: Okay. If there is
19 nothing further, then we will close the record at this
20 time and the hearing is concluded. Thank you.

21 (WHEREUPON, the proceedings were adjourned.)
22
23
24

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

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
Court Reporter II