

1 PLACE: Dobbs Building, Raleigh, North Carolina

2 DATE: Monday, March 9, 2015

3 TIME: 7:00 p.m. - 9:10 p.m.

4 DOCKET NO: E-100, Sub 141

5 BEFORE: Commissioner Bryan E. Beatty, Presiding

6 Chairman Edward S. Finley, Jr.

7 Commission Susan W. Rabon

8 Commissioner ToNola D. Brown-Bland

9 Commissioner Don M. Bailey

10 Commissioner Jerry C. Dockham

11 Commissioner James G. Patterson

12
13
14 **IN THE MATTER OF:**

15 General Electric

16 2014 Biennial Integrated Resource Plans and Related

17 2014 REPS Compliance Plans

18
19 VOLUME: 1

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P R O C E E D I N G S

COMMISSIONER BEATTY: Good evening. Let's come to order, please. My name is Bryan E. Beatty and I've been assigned to preside during this hearing. With me are Commission Chairman Edward S. Finley, Jr.; and Commissioners Susan W. Rabon, ToNola D. Brown-Bland, Don M. Bailey, Jerry C. Dockham and James G. Patterson.

I now call for hearing Docket Number E-100, Sub 141, In the Matter of the 2014 Biennial Integrated Resource Plans and Related 2014 Renewable Energy Portfolio Standards Compliance Plans.

Integrated Resource Planning, or IRP, is intended to identify those electric resource options that can be obtained at least cost to the ratepayers consistent with adequate, reliable electric service. IRP considers conservation, efficiency and load management, as well as supply-side alternatives, in the selection of resource options.

North Carolina General Statute 62-110.1(c) requires the Commission to "develop, publicize and keep current an analysis of the long-range needs" for electricity in this state.

To meet the requirements of G.S. 62-110.1,

1 the Commission conducts an annual investigation into
2 the electric utilities' IRPs. Commission Rule R8-60
3 requires that each of the electric utilities furnish
4 the Commission with a biennial report in even-numbered
5 years that contains the specific information set out
6 in that Commission Rule. As part of its IRP, each
7 electric utility must provide forecasts and
8 assessments for at least a 15-year period. Further,
9 Commission Rule R8-67(b) requires any electric power
10 supplier subject to Rule R8-60 to file a Renewable
11 Energy Portfolio Standard, or REPS, Compliance Plan as
12 part of its IRP report. Within 150 days of the filing
13 of each utility's biennial report, the Public Staff or
14 any other intervenor may file its own plan or an
15 evaluation of, or comments on, the electric utilities'
16 IRP reports. Also, the Public Staff or any other
17 intervenor may identify any issue that it believes
18 should be subject to an evidentiary hearing.

19 Commission Rule R8-60.1 requires each
20 utility, subject to Rule R8-60, to file its Smart Grid
21 Technology Plan, as described in Commission Rules,
22 beginning October 1, 2014, and every two years
23 thereafter. Within 30 days of the filing of each
24 utility's Smart Grid Technology Plan, the Public Staff

1 or any intervenor may file comments regarding the
2 plans and any party may file reply comments within 14
3 days after the filing of initial comments.

4 Between August 29 and September 2, 2014,
5 IRP's and REPS Compliance Plans were filed in these
6 proceedings by Dominion North Carolina Power, Duke
7 Energy Carolinas, Incorporated, and Duke Energy
8 Progress, Incorporated.

9 On September 29, 2014, the Commission issued
10 an Order Establishing Dates for Comments on the IRPs
11 and the REPS Compliance Plans.

12 On October 1, 2014, Dominion North Carolina
13 Power, Duke Energy Carolinas and Duke Energy Progress
14 each filed their Smart Grid Technology Plans. On
15 October 3, 2014, Dominion filed an update to page 78
16 of its Smart Grid Technology Plan.

17 On December 11, 2014, the Public Staff filed
18 a Motion for Extension of Time for the parties to file
19 initial comments and reply comments to the
20 Commission's, excuse me, to the utilities' Smart Grid
21 Technology Plans. The Presiding Commissioner issued
22 an Order extending the time for filing the initial
23 Smart Grid comments to January 9, 2015 and reply
24 comments to January 29, 2015.

1 On December 15, 2014, Duke Energy Carolinas
2 and Duke Energy Progress each filed corrections to
3 their Smart Grid Technology Plans.

4 The Public Staff's participation as a party
5 in these proceedings is recognized pursuant to G.S.
6 62-15(d).

7 And the following parties have been granted
8 intervenor status in these proceedings by Commission
9 Order: North Carolina Waste Awareness and Reduction
10 Network; Southern Alliance for Clean Energy; The
11 Sierra Club; North Carolina Sustainable Energy
12 Association; Carolina Utility Customers Association,
13 Incorporated; Environmental Defense Fund; Mid-Atlantic
14 Renewable Energy Coalition; North Carolina Electric
15 Membership Corporation; and Carolina Industrial Group
16 for Fair Utility Rates I, II and III.

17 On January 20, 2015, the Commission issued
18 an Order scheduling this hearing for this place, on
19 this date and at this time for the purpose of taking
20 non-expert public witness testimony with respect to
21 the current Biennial IRP Reports, including the
22 related REPS Compliance Plans. The Order required the
23 electric utilities to publish notice of this hearing
24 in newspapers having general circulation in their

1 respective service areas.

2 Comments concerning the IRPs and REPS
3 Compliance Plans from several members of the public
4 have been filed in this docket.

5 On January 9, 2015, the Public Staff and the
6 North Carolina Sustainable Energy Association and the
7 Environmental Defense Fund filed comments on the
8 utilities' Smart Grid Technology Plans. Each of the
9 utilities filed reply comments on January 29, 2015.

10 On February 20, 2015, upon motion of the
11 Public Staff, the Presiding Commissioner issued an
12 Order extending the time for filing initial comments
13 regarding the electric utilities' IRPs and REPS
14 Compliance Plans and Compliance Reports to March 2,
15 and the reply comments to March 19, 2015.

16 Initial comments on the IRPs and/or the REPS
17 Compliance Plans have been filed by the Public Staff,
18 North Carolina Waste Awareness and Reduction Network,
19 the Sierra Club, Southern Alliance for Clean Energy,
20 Mid-Atlantic Renewable Energy Coalition, and the North
21 Carolina Sustainable Energy Association.

22 On February 20, 2015, North Carolina WARN
23 also filed a request for an evidentiary hearing
24 regarding the utilities' IRPs.

1 On February 23, 2015, Dominion filed its
2 Affidavits of Publication of Notice for this hearing.
3 And Duke Energy Carolinas filed its Affidavits of
4 Publication today, March 9th.

5 In accordance with the State Government
6 Ethics Act, I remind members of our duty to avoid
7 conflicts of interest, and inquire at this time
8 whether any member has a known conflict of interest
9 with regard to this docket?

10 (No response.)

11 COMMISSIONER BEATTY: The record will
12 reflect that no conflicts were identified.

13 I will now call on the attorneys for the
14 parties to make their appearances for the record
15 beginning with the utilities.

16 MR. SOMERS: Good evening, Mr. Chairman,
17 members of the Commission, I'm Bo Somers, Deputy
18 General Counsel on behalf of Duke Energy Carolinas and
19 Duke Energy Progress.

20 MR. BREITSCHWERDT: Mr. Chairman, members of
21 the Commission, Brett Breitschwerdt with the Law Firm
22 of McGuireWoods on behalf of Dominion North Carolina
23 Power.

24 MR. LEDFORD: Mr. Chairman, members of the

1 Commission, Peter Ledford, Regulatory Counsel for
2 North Carolina Sustainable Energy Association.

3 MS. THOMPSON: Mr. Chairman, Commissioners,
4 Gudrun Thompson representing The Sierra Club and
5 Southern Alliance for Clean Energy.

6 MR. RUNKLE: Good evening. John Runkle
7 representing NC WARN.

8 MR. GILLAM: Good evening, Commissioners,
9 I'm Bob Gillam with the Public Staff, Legal Division,
10 representing The Using and Consuming Public.

11 COMMISSIONER BEATTY: Thank you and good
12 evening to all of you. All right. Has the Public
13 Staff identified any persons who wish to testify as
14 witnesses this evening?

15 MR. GILLAM: Yes, we do.

16 COMMISSIONER BEATTY: Can you give me an
17 approximate number?

18 MR. GILLAM: We have 13 that have signed up.

19 COMMISSIONER BEATTY: All right. Ladies and
20 gentlemen, I'd like to take a couple of minutes just
21 to explain how this hearing is conducted. The
22 Commission is required by law to function like a
23 court. Decisions are based on the evidence presented
24 to the Commission during public hearings, and persons

1 who wish to speak must be sworn and are subject to
2 cross examination by attorneys for the utilities or by
3 the Commissioners. If the attorneys or Commissioners
4 have questions they are intended to clarify or better
5 understand your comments, not to embarrass you.

6 In a moment, the attorney for the Public
7 Staff, Mr. Gillam, who represents consumers, will call
8 on persons who have signed up to speak one person at a
9 time. When your name is called, please come here to
10 the podium, there is a Bible there, and I will swear
11 you in or, if you prefer, I may affirm you to tell the
12 truth. The attorney for the Public Staff will ask you
13 to give your name and address for the record and then
14 you will be allowed to make your statement to the
15 Commission. This is your opportunity to let the
16 Commission hear from you and what you have to say
17 about the IRPs and the REPS Compliance Plans that were
18 filed by the utilities in this docket. Neither the
19 Commission nor the utilities can answer questions
20 during this hearing but, if you have questions, the
21 attorney for the Public Staff will be happy to speak
22 with you following the hearing, and the
23 representatives for the utilities may also be willing
24 to speak with you after I have adjourned this hearing.

1 As you can see, there is a Court Reporter
2 here seated in front of me. She is recording
3 everything that is said at the hearing. She will
4 prepare a transcript of the hearing and it will be
5 available for public review on the Commission's
6 website.

7 If there is nothing further from counsel,
8 Mr. Gillam, you'll please call your first witness.

9 MR. GILLAM: Bobi Gallagher.

10 BOBI GALLAGHER; was duly sworn and
11 testifies as follows:

12 COMMISSIONER BEATTY: Please be seated. Mr.
13 Gillam.

14 DIRECT EXAMINATION BY MR. GILLAM:

15 Q Good evening. Would you state your name and
16 address for the record, please?

17 A Yes. Bobi Lee Gallagher. I reside at 120 Long
18 Shadow Place in Durham 27713.

19 Q And do you receive service from Duke Energy
20 Carolinas?

21 A I am a Duke Energy customer, yes.

22 Q Do you have a statement to make tonight?

23 A Yes.

24 Q Please do.

1 A Last week I took two of my grandchildren to the
2 Greensboro Science Center. My granddaughter was
3 captivated by the fishing cats which are an
4 endangered species. I reflected on how many
5 species had become endangered and by the
6 approximate change in the earth's terrestrial
7 wildlife population since my oldest child was
8 born. That is a loss of 39 percent from 1970 to
9 2010. The approximate change in the earth's
10 marine wildlife population is also about
11 39 percent in the same period of time. The
12 approximate change for the earth's freshwater
13 wildlife population from 1970 to 2010 is a loss
14 of 76 percent. All these figures are from the
15 World Wildlife Fund 2014.

16 We must see ourselves as stewards
17 of life of nature not greedy destroyers. Our
18 children's future depends on this and the
19 generations which follow them. We need to think
20 in terms of seven or 10 generations into the
21 future, not corporate profits this quarter or
22 this year. Everyone needs to come together and
23 support the life of human beings and the earth.

24 Others have begun this change. In

1 2004, global new investment and renewable energy
2 was \$40 billion. By 2014, it was \$214 billion.
3 In 2004, the world capacity for solar power was
4 3.7 gigawatts; in 2013, 139 gigawatts. These
5 figures come from the Renewable Energy Policy
6 Network for the 21st Century Global Status Report
7 of 2014.

8 The people of North Carolina need
9 to take advantage of the cleaner, cheaper energy
10 of all classes of people to build a healthy place
11 for people and wildlife to flourish together. No
12 more chemical destruction of freshwater
13 environments which kill the life in them and
14 taint the food from them. No more destruction of
15 mountaintops. No more air pollution. This would
16 require closing all coal-fired plants and
17 scrapping of plans to build newer, larger ones.

18 A recent study from the Nicholas
19 School of The Environment found that when the
20 environmental and human health toll is factored
21 into the price of a gallon of gasoline, it costs
22 us \$3.80 more than the price at the pump, the
23 social cost of the price of natural gas more than
24 doubles, and coal-fired electricity more than

1 quadruples. Solar and wind power, on the other
2 hand, become cheaper than they initially seem.
3 We think we know what the prices of fossil fuels
4 are, but their impacts on climate and human
5 health are much larger than previously realized.
6 We're making decisions on misleading costs. This
7 is from a February 26, 2015, *Journal of Climate*
8 *Change* article by Drew Shindell, a Duke
9 professor.

10 For the next 15-year plan, I urge
11 you to adopt NC WARN's Responsible Energy Future
12 Plan. It calls for a greater but achievable
13 commitment to reach 24 percent energy efficiency
14 and 7 percent renewable energy by 2029. By
15 adding competition to the electricity market and
16 taking advantage of the new, clean energy
17 innovations and the newly developed battery
18 storage designs, North Carolina can benefit from
19 the clean energy revolution in the next 15 years.
20 If you do so, affordable housing, churches,
21 schools and civic buildings can share in the
22 benefits of lowered rates and cleaner air and
23 water then our future generations can thrive in a
24 healthier environment. And when my granddaughter

1 is a grandmother I hope she can take her
2 grandchildren to see fishing cats and other
3 endangered animals thriving in the wild.

4 Let's think smarter. Let's plan
5 for a cleaner, more responsible energy future.
6 Thank you.

7 MR. GILLAM: Thank you, Ms. Gallagher.

8 COMMISSIONER BEATTY: Questions?

9 MR. GILLAM: No questions.

10 COMMISSIONER BEATTY: Questions by any
11 parties? Questions from Commissioners?

12 CHAIRMAN FINLEY: Ms.Gallagher, what's a
13 fishing cat?

14 MS. GALLAGHER: It's a freshwater critter,
15 and it looks like a large house cat, and it sits by
16 the water and when it sees a fish it jumps in and
17 swims, grabs the fish and gets out. It's amazing!
18 She was captivated for a long time.

19 COMMISSIONER BEATTY: Any other questions?
20 Thank you very much, Ms. Gallagher. I appreciate you
21 coming out this evening.

22 (The witness is excused.)

23 MR. GILLAM: Avram Friedman.
24

1 AVRAM FRIEDMAN; was duly sworn and
2 testifies as follows:

3 DIRECT EXAMINATION BY MR. GILLAM:

4 Q Mr. Friedman, please state your name and address
5 for the record, please.

6 A My name is Avram Friedman. I live at 1346
7 Dillsboro Road in Sylva, North Carolina, which is
8 in Jackson County.

9 Q What utility, if any, do you get your electric
10 service from?

11 A Duke Energy is my service provider.

12 Q Do you have a statement to make tonight?

13 A I do.

14 Q Please go ahead.

15 A The Utilities Commission is charged with finding
16 the least cost method of meeting our energy
17 demands. The problem is that this comes into
18 conflict with an antiquated and obsolete system
19 of regulated monopoly in North Carolina which
20 guarantees a reasonable rate of return on all
21 capital expenditures to Duke Energy. And this
22 reasonable rate of capital return and guaranteed
23 reasonable rate of capital return becomes a
24 powerful incentive for Duke Energy to increase

1 its generating capacity and increase electrical
2 consumption in North Carolina. And that's
3 reflected in the IRP, which every year has been
4 more of a business plan for Duke Energy than it
5 has been a method of providing energy at the
6 least cost for its consumers. It reflects a
7 steady growth of electrical consumption and
8 production so that they can make more money for
9 their shareholders just what you expect any
10 business to do. And so -- but that again comes
11 into conflict with the charge of the Utilities
12 Commission which is to provide the least cost for
13 energy consumption for North Carolinians'
14 ratepayers.

15 So what I'm suggesting is that the
16 Utilities Commission seriously consider advising
17 the state government that it's time to change
18 this antiquated and obsolete system; that it's
19 time to begin providing incentives for the
20 electrical consumer to invest in energy
21 efficiency, rooftop solar energy systems, and
22 reduce energy consumption statewide because that
23 is indeed the least cost method of meeting energy
24 consumption in North Carolina.

1 We have such a plan -- I represent
2 the Canary Coalition and 11 other organizations
3 that have introduced this bill into the North
4 Carolina General Assembly twice before in 2011
5 and 2013, and we're reintroducing it again this
6 year. It's called the Efficient and Affordable
7 Energy Rates Bill and it would create a system of
8 inverted, tiered, block-rate structures; separate
9 structures for residential, commercial and
10 industrial ratepayers. It's being used very
11 successfully in other states and other countries
12 to reduce energy consumption while generating
13 thousands of jobs in new industries and energy
14 efficiency and rooftop solar energy. I would
15 urge the Utilities Commission not to resist this
16 but to get behind it and really fulfill your
17 charge of providing the least cost method of
18 meeting North Carolina's energy consumption. I'm
19 going to leave this with you and thank you for
20 listening.

21 Q Mr. Friedman.

22 A Yes.

23 Q In what states are these inverted rates used?

24 A They are used in California, Arizona, New Mexico,

1 Nevada, Colorado, Iowa, Washington State and
2 Vermont.

3 MR. GILLAM: No further questions.

4 COMMISSIONER BEATTY: Questions from any
5 other parties? Questions from Commissioners? Thank
6 you very much, Mr. Friedman, we appreciate you coming
7 down the hill.

8 MR. FRIEDMAN: Where can --

9 COMMISSIONER BEATTY: Oh, Mr. Gillam, would
10 you like to have that identified and entered into the
11 record?

12 MR. GILLAM: Yes, please. It can be
13 Friedman Exhibit 1.

14 COMMISSIONER BEATTY: All right. So
15 identified an entered into the record.

16 (Friedman Exhibit 1 Identified and Admitted.)

17 MR. GILLAM: Michael Carroway.

18 MICHAEL CARROWAY; was duly sworn and
19 testifies as follows:

20 DIRECT EXAMINATION BY MR. GILLAM:

21 Q Would you state your name and address for the
22 record, please?

23 A Michael Carroway, 206 Highwoods Drive, Goldsboro,
24 North Carolina.

1 Q And who provides your electric service?

2 A Duke Energy.

3 Q Do you have a statement that you'd like to make
4 tonight?

5 A Yes.

6 COMMISSIONER BEATTY: Mr. Carroway, if you
7 would, pull the microphone -- oh, Mr. Gillam, all
8 right. Pull the microphone a little closer,
9 Mr. Gillam. Thank you, sir.

10 A Today, I'm just here with more of a concern. As
11 we all know, the coal ash dumps have been in
12 local state and national news, and as the courts
13 drop down legislation on these various sites --
14 we have one in Goldsboro, the HF Lee Plant. And
15 a lot of the residents are concerned that our
16 rates are going to go up in the future as a
17 recoupe of the penalties assessed to Duke. The
18 Dan River spill was a -- about \$100 million fine
19 that was levy, however they want to phrase it,
20 but we're looking at with 14 of these plants
21 throughout the state as they go through the
22 process what is going to happen. Is Duke going
23 to try to come back and recoupe those funds
24 through rate hikes. Being in southeastern North

1 Carolina, we have enormous land, just flat, open,
2 sun, direct sunlight coming down, and we're
3 concerned about are we going to -- if this were
4 to continue on this path with the coal ash plants
5 versus pivoting to renewable energy. Being in
6 North Carolina, the position where it is
7 geographically, it makes sense for us, we should
8 be leading the charge in renewable energy, but it
9 seems like we're falling behind other states.

10 So that's my concern for being
11 here today. I'm new to the whole coal ash and
12 renewable energy thing but as I get more involved
13 in it I'd like to come back at another time and
14 give you more stats and data and stuff like that.
15 Thank you.

16 MR. GILLAM: Thank you, Mr. Carroway. No
17 questions.

18 COMMISSIONER BEATTY: Questions from any
19 parties? Mr. Runkle. Mr. Carroway, if you would, Mr.
20 Runkle has a question for you.

21 CROSS EXAMINATION BY MR. RUNKLE:

22 Q Sir, what do you do for a living?

23 A Excuse me.

24 Q What do you do for a living?

1 A I'm a retired military veteran, 24 years active
2 duty, Air Force.

3 Q Are you involved with your church?

4 A Very active with my church and my community.

5 Q What's the name of the church?

6 A The church I attend is Ebenezer Missionary
7 Baptist Church.

8 Q In Goldsboro?

9 A Well, it's located in La Grange, North Carolina,
10 about 20 minutes outside of Goldsboro.

11 MR. RUNKLE: All right. Thank you.

12 COMMISSIONER BEATTY: Any other questions?
13 Thank you very much, Mr. Carroway.

14 (The witness is excused.)

15 MR. GILLAM: Ladies and gentlemen, please,
16 when you finish making your statement do not get up
17 and leave because we do have the opportunity for the
18 Commissioners and the attorneys to ask you questions.

19 Jim Senter.

20 JIM SENTER; was duly affirmed and
21 testified as follows:

22 DIRECT EXAMINATION BY MR. GILLAM:

23 Q Mr. Senter, would you state your name and address
24 for the record?

1 A My name is Jim Senter, S- E- N- T- E- R, and my
2 address is 41 Potluck Farm Road in Rougemont,
3 North Carolina, and that's Person County.

4 Q Do you receive service from Duke Energy Progress?

5 A No, my provider is Piedmont EMC.

6 Q Okay. Do you have a statement you'd like to make
7 tonight?

8 A Yes, I do.

9 Q Please do.

10 A Commissioners, I have an unpleasant task tonight.
11 In this Integrated Resource Plan, this plan is a
12 sick joke. It ties us to 20 more years of 19th
13 century technology at a time when we need to be
14 facing the future. A burning stuff to make
15 electricity is so 19th century. And, you know,
16 your job is to see to it that we have electricity
17 at the lowest possible cost. Well, there are so
18 many costs that are not included in this plan,
19 not included in the market price of electricity,
20 that it makes the whole thing a joke.

21 What is the price of having West
22 Virginia communities have the earth ripped out
23 from under them with coal -- mountaintop removal?
24 And the forest of the southern Appalachians are

1 some of the richest, most diverse, forests in the
2 world. I remember when I first walked through
3 the woods of West Virginia, I couldn't -- I
4 didn't recognize a black cherry tree because I
5 wasn't used to seeing them three feet in diameter
6 and 60 feet tall. What is the price? What is
7 the cost of ripping that up and throwing it into
8 the stream, the stream courses? And I remember
9 swimming in spring-fed streams where water,
10 straight up out of the ground, 60 degrees,
11 swimming holes so cold, fiery cold, the water
12 was. What is the cost of bulldozing that? It's
13 hardly possibly to put a dollar value.

14 And I don't know if you noticed
15 but yesterday news came out of Colorado, the gas
16 producers in that state are ignoring the law and
17 walking away from their wells once they're
18 finished producing and leaving the state and its
19 people to clean up the mess. What is the price
20 of giving more money and more power to a criminal
21 conspiracy like gas producers? I'm from southern
22 Louisiana. It doesn't surprise me that the
23 resource extractors ignore the law and leave the
24 public with a mess. But what is the cost of

1 that?

2 I think it is your job as
3 protectors of the public welfare to at least
4 consider that, and this isn't in the IRP. And,
5 you know, Lynn Good wants us to believe that 4
6 percent renewable energy by 2029 is the best she
7 can do, the best that Duke Power can do. That is
8 almost laughable because when Duke Power wanted
9 to get approval for its merger with Progress to
10 create the largest utility monopoly in the world,
11 they did what it took. You know, when Duke Power
12 wanted to put its boy in the governor's mansion
13 here in Raleigh, they did what it took. And if
14 Duke wanted to it could transform the energy
15 industry in this country, I mean, in this state,
16 excuse me.

17 And what is the cost of missing
18 out on the job creation opportunities that is
19 presented by the renewable energy industry? What
20 is the cost of missing out on the opportunities
21 that that industry represents? What is the --
22 and the North Carolina Sustainable Energy
23 Coalition just came out with a report that
24 identified \$900 million in benefits from the \$80

1 million tax investment that the state gave to the
2 industry. What is -- what -- I'm repeating
3 myself, excuse me. Climate change is the most
4 critical threat which this state, this nation,
5 the human species faces. It's not ISIS. It's
6 not Vladimir Putin. It's climate change.

7 And, you know, in 1933, when
8 30,000 out-of-work veterans were camped on the
9 mall in Washington, when one out of 4 percent of
10 the people in this country were out of work,
11 President Roosevelt signed the Emergency
12 Conservation Work Act and nine months later there
13 were three million young men at work in the
14 civilian conservation corp camps.

15 And here in this state they built
16 John Umstead State Park. They built Morrow
17 Mountain State Park. They built Fort Macon State
18 Park. They built the Pea Island and Lake
19 Mattamuskeet Wildlife Refuges. They built things
20 that, to this day, we are benefiting from. And
21 that is the kind of leadership that this point in
22 history requires of us as citizens and you as
23 Utilities Commissioners. And I would urge you to
24 reject this IRP, send it back, and, you know,

1 let's do what needs to be done. Thank you.

2 MR. GILLAM: Thank you, Mr. Senter. No
3 questions.

4 COMMISSIONER BEATTY: Questions from any
5 party? Questions from Commissioners? Thank you very
6 much, Mr. Senter. We appreciate you coming this
7 evening.

8 MR. SENTER: Thank you.

9 (The witness is excused.)

10 MR. GILLAM: Harvey Richmond.

11 HARVEY RICHMOND; was duly sworn and
12 testifies as follows:

13 DIRECT EXAMINATION BY MR. GILLAM:

14 Q Please state your name and address for the
15 record.

16 A Harvey Richmond, 106 Hebride Court, Cary, North
17 Carolina 27513.

18 Q Do you receive electric service from Duke Energy
19 Progress?

20 A Duke Energy Progress, correct.

21 Q Do you have a statement you'd like to make?

22 A Yes, I do.

23 Q Please proceed.

24 A Thank you, Mr. Chairman and Commission members.

1 Thank you for the opportunity to speak tonight.
2 I worked with the U.S. EPA's Air Quality Program
3 as a Senior Environmental Analyst for over 31
4 years. I'm retired since 2009. While I am the
5 Conservation Committee Chair and Vice Chair of
6 the Capital Group of the Sierra Club, I'm here
7 speaking today as a concerned private citizen.

8 The draft Integrated Resource
9 Plans are a road map to how our public utilities
10 will supply us reliable and affordable energy
11 over the next 15 years. Decisions about energy
12 have a profound impact on public health, the
13 quality of our air and water, our economic
14 well-being, and our climate.

15 In addition to the mandate to
16 provide reliable and affordable energy, our
17 public utilities also need to provide clean
18 energy that is consistent with a sustainable
19 energy future that protects our air, our water
20 and our climate.

21 When the U.S. EPA finalizes the
22 Clean Power Plan rules addressing carbon
23 emissions from existing coal-fired power plants
24 later this summer, developing and implementing a

1 Clean Power Plan for North Carolina will be a
2 federal legal requirement.

3 In a *News & Observer* article from
4 July of last year, the Public Staff was quoted as
5 saying it supports only "known and quantifiable
6 costs" that for now don't include carbon
7 reduction. This needs to change and it needs to
8 change now.

9 The Clean Power Plan, as proposed
10 by the U.S. EPA last summer, allows for
11 considerable flexibility, allowing each state to
12 develop its own plan on how it will reduce
13 emissions. North Carolina will have the
14 opportunity to develop a plan that includes
15 increasing reliance on renewable energy sources,
16 such as solar and wind. The Plan also can and
17 should increase energy efficiency efforts and
18 speed up additional retirement of coal-fired
19 power plants.

20 Duke Energy and Duke Energy
21 Progress fail to fully consider the least cost,
22 least risk energy sources, which are energy
23 efficiency and renewable energy in their draft
24 IRPs. Both companies are planning to build too

1 much unnecessary and unjustified capacity,
2 without first maximizing clean energy and energy
3 efficiency that has known benefits for clean air,
4 clean water, and reduced costs for consumers.
5 Leading utilities are achieving far more energy
6 efficiency than Duke Energy and that means North
7 Carolina consumers are losing out on benefits
8 that can help lower their bills and lead to less
9 pollution from power plants.

10 When it comes to renewables, North
11 Carolina is a leader in developing clean energy
12 sources. North Carolina ranks first in the south
13 and fourth in the nation in solar energy capacity
14 according to a new report from Duke University.
15 North Carolina's clean energy workforce swelled
16 to nearly 23,000 jobs in 2014 compared to only
17 1824 clean energy jobs in 2007, according to the
18 North Carolina Sustainable Energy Association.

19 While Duke Energy has supported
20 some utility-scale solar projects in North
21 Carolina and recently was distributing a list of
22 planned projects at the recent Clean Tech Summit
23 in Chapel Hill that I attended, many more
24 projects larger than 5 megawatts have been

1 submitted to Duke Energy and Duke Energy Progress
2 and the Utilities have failed to act on many of
3 these projects.

4 If we want to avoid large capital
5 expenditures for new, expensive, large power
6 generation facilities, Duke Energy and Duke
7 Energy Progress and this public Utilities
8 Commission need to get serious about promoting
9 increased energy efficiency and supporting the
10 development and use of more renewable energy.

11 They need to get on board in supporting an
12 extension of the renewable energy tax credit
13 which is set to expire this year. Over 75
14 percent of voters support the extension of this
15 tax credit, and regardless of whether they're
16 Democrats or Republicans the support is strong.
17 They also need to support a bill that
18 Representative John Szoka is going to introduce
19 to allow third-party sales for military bases,
20 local and county governments, churches and other
21 non-profits, and schools and universities.

22 Once the U.S. EPA finalizes the
23 Clean Power Plan rules this summer, North
24 Carolina regulators will have to develop a plan

1 that will reduce carbon emissions by some
2 significant percentage. Currently, a 40 percent
3 reduction is in the proposed rule. I urge the
4 Utilities Commission and Public Staff to open up
5 a public stakeholder process, even if the
6 Department of Environment and Natural Resources
7 fails to do so. Other utility commissions in the
8 southeast have begun this process and it's time
9 to start a public dialogue on how we best can
10 plan our energy future taking into account these
11 new requirements to address greenhouse gas
12 emissions from coal-fired power plants.

13 North Carolina has already
14 demonstrated in recent years that it can make
15 changes in its electricity portfolio, such as
16 retiring pollution -- polluting coal-fired power
17 plants and integrating large-scale solar power
18 into the grid, without significant impacts on
19 cost or reliability.

20 Our public utilities should be
21 doing more to analyze the various potential paths
22 toward complying with the Clean Power Plan in
23 these draft IRPs. It's time to transition to a
24 clean energy future that will protect our health,

1 our economy, and help slow the impacts of climate
2 change. Thank you.

3 Q Thank you, Mr. Richmond. I agree with several
4 portions of what you said, but I noticed that you
5 were critical of the Public Staff for saying that
6 utilities should only be permitted to recover
7 known and quantifiable costs. Do you think it
8 would be a good idea if the state's utilities
9 could recover from their customers unknown and
10 unquantifiable costs?

11 A No. What I'm saying is that the social cost of
12 carbon, which the federal government has made
13 progress on, OMB and the EPA have done work on
14 estimating social costs of carbon and that needs
15 to come into play as we weigh whether something
16 is affordable and cost efficient. That's part of
17 the goal of the Public Staff representing us
18 consumers, and the social cost of carbon, what
19 carbon does in terms of its disposal, if it's
20 coal ash, its impact on our air and water; those
21 need to be taken into account, not just the
22 economic costs that are easy to many.

23 MR. GILLAM: No further questions.

24 COMMISSIONER BEATTY: Questions from other

1 parties? Questions from Commissioners? Thank you
2 very much, Mr. Richmond. We appreciate your testimony
3 this evening.

4 MR. GILLAM: Is this an exhibit that you'd
5 like to have introduced into the record?

6 MR. RICHMOND: (Inaudible.)

7 CHAIRMAN FINLEY: It's a copy of his
8 testimony, Mr. Gillam.

9 COMMISSIONER BEATTY: Is it just what you
10 just read?

11 MR. RICHMOND: Yes, sir.

12 MR. GILLAM: Well then, I don't think it
13 needs to be introduced.

14 COMMISSIONER BEATTY: It was transcribed
15 into the record so we appreciate you bringing it
16 though, Mr. Richmond. Thank you very much.

17 (The witness is excused.)

18 MR. GILLAM: Nick Brown.

19 NICK BROWN; was duly sworn and
20 testifies as follows:

21 DIRECT EXAMINATION BY MR. GILLAM:

22 Q Would you state your name and address for the
23 record?

24 A Nick Brown, 2220 Oxford Road here in Raleigh,

1 North Carolina 27608.

2 Q And from whom do you receive electric service?

3 A Duke Energy Progress.

4 Q Do you have a statement to make?

5 A Yes, sir.

6 Q Please make it.

7 A Mr. Chairman and members of the Commission, my
8 name is Nick Brown and I am a volunteer leader
9 with the Sierra Club's Capital Group right here
10 in Raleigh. I'm also a concerned citizen worried
11 about the future of our state. Our climate is
12 undergoing serious changes which increase with
13 each passing year. Temperatures are increasing
14 on a global scale, sea levels are rising, our
15 oceans are becoming more acidic and extreme
16 weather events are becoming more frequent.
17 Unfortunately, the latest draft IRPs from Duke
18 Energy Carolinas and Duke Energy Progress
19 demonstrate that our utility companies are not
20 doing nearly enough to address the cause of these
21 problems - carbon pollution.

22 Last year the Environmental
23 Protection Agency took a monumental step toward
24 combating rising carbon emissions in their

1 corollary climate change. The Federal Clean
2 Power Plan proposes to significantly reduce
3 carbon emissions through the regulation of
4 coal-fired power plants. The Clean Power Plan
5 ensures that each state does its part to curb
6 carbon emissions. While the Clean Power Plan
7 will not solve our climate crisis on its own, it
8 is an important first step for our country and
9 one that the Commission should not ignore when
10 considering these IRPs. The Commission is in a
11 position to ensure that our state gets ahead on
12 compliance with the Clean Power Plan through an
13 increased commitment to renewable energy and
14 energy efficiency.

15 North Carolina is already among
16 the leaders in solar energy capacity. We should
17 be building on our strong foundation as a
18 renewable energy leader by bringing more
19 renewables and energy efficiency into the energy
20 mix.

21 The IRPs submitted by Duke Energy
22 Carolinas and Duke Energy Progress are
23 problematic because they do not acknowledge the
24 advances and renewable energy technology or their

1 cost competitiveness. And speaking of costs, the
2 IRPs fail to factor into the enormous cost of
3 fossil fuel power generation sources to our
4 public health and our coastal economy; costs
5 which renewables and energy efficiency are
6 specifically designed to avoid.

7 The Public Utility's Act is clear
8 that the Commission is guided by consideration of
9 the public interest. Under the Act, the
10 Commission is required to encourage and promote
11 harmony between utilities, users and the
12 environment.

13 Duke Energy is going slow on
14 renewable energy presumably because they see
15 renewables as a threat to their own bottom line.
16 But the bottom line for the rest of us is simply
17 this: A future without significant renewable
18 energy generation is no future at all. I,
19 therefore, encourage the Commission to engage the
20 public stakeholder process and discuss how North
21 Carolina will comply with the Clean Power Plan.
22 Thank you.

23 MR. GILLAM: Thank you, Mr. Brown. No
24 questions.

1 COMMISSIONER BEATTY: Questions from any
2 parties? Mr. Somers?

3 MR. SOMERS: I do.

4 CROSS EXAMINATION BY MR. SOMERS:

5 Q Good evening, Mr. Brown.

6 A Good evening.

7 Q Have you read the Duke Energy Carolinas and Duke
8 Energy Progress 2014 IRPs?

9 A I've read parts of it, not the entire -- not in
10 entirety.

11 Q Which part did you read?

12 A Beginning sections, I also read comments that
13 were submitted by certain entities on both sides
14 commenting about the IRPs.

15 Q Okay. I believe you made a statement that Duke
16 Energy Carolinas and Duke Energy Progress were
17 going slow presumably because it was a threat to
18 their bottom line. Do you remember testifying to
19 that effect?

20 A Yes, sir.

21 Q What do you base that on?

22 A Well, I'm not pleased with the amount of
23 renewable energy progress that Duke Energy is
24 proposing in the IRPs over the next 15 years. It

1 should be much higher. And my assumption is that
2 one reason that Duke Energy is so adverse to
3 incorporating significant renewable energy is
4 because it is more profitable for Duke Energy to
5 engage in fossil fuel power generation.

6 MR. SOMERS: Okay. Thank you.

7 A Thank you.

8 COMMISSIONER BEATTY: Questions by
9 Commissioners? Commissioner Bailey.

10 EXAMINATION BY COMMISSIONER BAILEY:

11 Q Good afternoon, Mr. Brown. Just one more
12 question. Have you had a chance to read Duke
13 Energy's comment to the Clean Power Plan to the
14 EPA?

15 A No, sir, I have not.

16 COMMISSIONER BAILEY: Thank you.

17 COMMISSIONER BEATTY: Questions? Thank you
18 very much, Mr. Brown. We appreciate you coming out
19 this evening.

20 MR. BROWN: Thank you.

21 (The witness is excused.)

22 MR. GILLAM: John Shaw.

23 JOHN SHAW; was duly sworn and

24 testifies as follows:

1 DIRECT EXAMINATION BY MR. GILLAM:

2 Q Good evening, Mr. Shaw. Please state your name
3 and address for the record.

4 A I am John A. Shaw and I live at 217 Lake Brandt
5 Drive, Cary, North Carolina.

6 Q Do you receive service from Duke Energy Progress?

7 A Yes, from Duke Energy Progress.

8 Q Do you have a statement to make tonight?

9 A Yes, I do.

10 Q Please do.

11 A Good evening, Commissioners. I'm John Shaw from
12 Cary, North Carolina. By way of introduction, I
13 worked at Duke Power's Marshall and Belews Creek
14 coal-fired plants and also did some work for the
15 Oconee and McGuire nuclear plants. This was in
16 the early 1970's. Earlier, I spent a summer
17 while I was a student working at the Sutton
18 coal-fired plant of Carolina Power & Light now
19 Duke Energy Progress. I have not worked for Duke
20 in about 4 percent decades and I certainly do not
21 speak for them or as an employee. I'm speaking
22 only as a customer of Duke Power and a citizen of
23 North Carolina. And I'm speaking on the
24 Integrated Resource Plans for Duke Energy

1 Carolinas and Duke Energy Progress and my remarks
2 apply to both.

3 I applaud Duke for the very high
4 efficiency of its coal plants and its commitment
5 for building more renewable resources
6 particularly solar power production. However, I
7 do not believe that that commendment (sic) is
8 enough.

9 I grew up on the coast of North
10 Carolina. I am particularly concerned about sea
11 level rise and other effects of climate change
12 that will result from the release of carbon
13 dioxide into the air. I think that it is very
14 important for Duke Energy and others to reduce
15 the production of carbon dioxide as quickly as
16 possible.

17 One way of reducing the production
18 of carbon dioxide is to reduce the use of
19 electricity through efficiency. Duke does
20 encourage greater efficiency and reduced use of
21 electric power, but more can and should be done.
22 Of course, it is hard to quantify the effect of
23 this encouragement because Duke's efforts
24 combined with the efforts of many others

1 including stores that sell LED light bulbs and
2 high efficiency appliances, and the simple desire
3 of consumers and industries to save money.

4 Another more direct way is the
5 production of electricity from renewable
6 resources particularly solar and wind. Whenever
7 a solar panel produces power from the sun, less
8 coal is burned and less carbon dioxide is
9 produced. Even though a solar panel produces
10 power only for a few hours during the day, and
11 the power at night is produced by other means,
12 there is still a reduction in CO2 being produced.

13 I do not believe that nuclear is a
14 reasonable option due primarily to the economic
15 risk of such plants. Nuclear power plants are
16 large, expensive and require a long lead time
17 before they are completed. There's uncertainty
18 in future demand. The cost of building a plant
19 that is not used or is delayed is borne by the
20 ratepayer and is too much of a risk. For that,
21 and for other reasons, I oppose the use of
22 nuclear power and the construction of any further
23 nuclear power plants.

24 Another consideration that I do

1 not believe was adequately addressed in the IRPs
2 is the amount of water lost to evaporation in the
3 cooling of steam plants. Steam plants, whether
4 they're coal, oil, gas, or nuclear, reject heat
5 to the atmosphere through the use of cooling
6 towers and cooling water. Water is evaporated to
7 remove the heat either in cooling towers or from
8 the surface of lakes and rivers. Our water
9 supply in North Carolina, as everywhere, is
10 limited. And we should not increase the loss of
11 water for use in steam plants. Solar and wind do
12 not use water for cooling. Coal, oil, gas and
13 nuclear do. I believe that the IRP should
14 reflect that use and discuss the limitations on
15 the use of water and possible limitations on the
16 cooling which is necessary for steam plants.

17 I thank the Commission for the
18 opportunity to allow me to speak.

19 Q Thank you, Mr. Shaw. Let me just ask you, as you
20 have kept up with developments in regard to
21 renewables and conservation in North Carolina,
22 have you seen that Duke Carolinas and Duke
23 Progress are beginning to use solar power for not
24 just the REPS solar requirement but also for the

1 general requirement that's the substitute for
2 biomass which is renewable but involves
3 combustion and releases carbon dioxide? Have you
4 seen about that?

5 A I am aware of the solar installations both by
6 Duke and by Duke's customers which would have the
7 same effect. As far as saying if Duke is doing
8 that because they're required to for the REPS or
9 because of a desire to reduce combustion, I
10 really cannot speak as to Duke's reasons behind
11 that. But I am aware of solar installations that
12 have been made.

13 Q Regardless of the thought processes in their
14 mind, would you encourage them to continue
15 increasing the use of solar power in lieu of
16 biomass?

17 A Yes, I would. Biomass -- and I didn't mention
18 that in my remarks -- but if biomass is burned to
19 produce energy and to produce steam, that steam
20 does have to be condensed after it goes through
21 the turbine. That does require water. And so
22 it, like the other forms of steam plants, does
23 consume water through evaporation, and basically
24 the efficiency of the plant depends very much

1 upon the temperature of the combustion. If the
2 temperature -- and I don't know what it is -- of
3 combustion of biomass is significantly less than
4 that of coal, its efficiency would have to be
5 much smaller and, therefore, per kilowatt hour it
6 would have to use more water. So I would
7 definitely encourage Duke to use solar power to
8 reduce the amount of combustion of biomass as
9 well as combustion of coal and gas.

10 MR. GILLAM: Thank you, Mr. Shaw. That's
11 all I have.

12 COMMISSIONER BEATTY: Questions from any of
13 the other parties? Questions from Commissioners?
14 Commissioner Brown-Bland.

15 EXAMINATION BY COMMISSIONER BROWN-BLAND:

16 Q Mr. Shaw, could you just tell us what your
17 professional background is?

18 A Yes. I have a degree in electrical engineering
19 from North Carolina State, and I worked at Duke
20 Power as an engineer primarily in control
21 systems, not in anything to do with the actual
22 electricity but the electronics of control
23 systems, up until 1975. Since then, I worked
24 primarily in the design of control systems for

1 chemical power, pulp and paper, and
2 pharmaceutical industries.

3 COMMISSIONER BROWN-BLAND: Thank you.

4 A Thank you.

5 COMMISSIONER BEATTY: Other questions from
6 Commissioners? Thank you, Mr. Shaw. We appreciate
7 you coming this evening.

8 MR. SHAW: Thank you.

9 (The witness is excused.)

10 MR. GILLAM: Harry Phillips.

11 HARRY PHILLIPS; was duly sworn and
12 testifies as follows:

13 DIRECT EXAMINATION BY MR. GILLAM:

14 Q Mr. Phillips, state your name and address for the
15 record, please.

16 A My name is Harry Phillips. I live at 8719 Morrow
17 Mill Road, Mebane, North Carolina 27302.

18 Q From whom do you receive your electric service?

19 A Duke Energy Carolinas.

20 Q Do you have a statement to make?

21 A Yes, sir, I do. Thank you.

22 Q Please proceed.

23 A Thank you. Duke Energy's 2015 IRP reveals a
24 corporation trending backward in time, out of

1 touch with the way a responsible utility should
2 behave during the climate crisis, and
3 disturbingly insensitive to the people and
4 environment it continues to exploit.

5 As I make these few brief comments
6 tonight, I ask that the Utilities Commission step
7 up and exercise the enlightened leadership needed
8 to move Duke off its worn out, profit seeking,
9 air polluting, water damaging, climate warming,
10 ratepayer abusing model. And I would ask that
11 the Commission use its clout to influence public
12 policy in ways that allow our state to merge with
13 the clean energy movement that many other states
14 now embrace.

15 Should you need to be convinced
16 that we can transition to renewable energy
17 sources quickly, turn to scientific scholarship.
18 One set of scholars argues in the General Energy
19 Policy that 100 percent of the world's energy for
20 all purposes could be supplied by wind, water and
21 solar resources by as early as 2030.

22 In contrast, by 2029, Duke intends
23 to produce 4 percent of its energy from
24 renewables. If 100 percent by 2030 is a stretch,

1 consider that NOAA, the U.S. National Oceanic and
2 Atmospheric Administration, contends that based
3 on its research into changing weather patterns,
4 cost-effective wind and solar could constitute
5 nearly 60 percent of the U.S. electricity system
6 by 2030. Consider also that the conservative
7 U.S. Department of Energy argues that wind, solar
8 and other currently available green technologies
9 could meet 80 percent of Americans electricity
10 needs by 2050.

11 But Duke has fashioned aggressive
12 campaigns over the years that attempt to
13 invalidate the practicality of renewable energy
14 production. This moment in our state's energy
15 history is no exception. Most insidious among
16 these campaigns is Duke's current contention that
17 solar installations harm low income people,
18 especially people of color, as new residential
19 solar installations presumably will force
20 ratepayers to pay more to compensate for Duke
21 losing revenue. Were Duke generally concerned
22 about low-income populations and folks on fixed
23 incomes, it would not argue so strenuously
24 against de-monopolizing, and it would back off

1 from its intent to charge ratepayers for new and
2 unnecessary power plants.

3 Many argue, accurately in my view,
4 that what keeps our state from taking better
5 advantage of our abundant renewable resources is
6 political and social in nature. No one knows
7 North Carolina's energy industry better than the
8 Chair and Commissioners in this room; no one.
9 You know the political conventions and protocol
10 are sensitive to winks and nods, and you know
11 that factually Duke's super pack is by far the
12 biggest contributor to political campaigns in our
13 state.

14 What can the Commission do to
15 rescue our state from the dark ages of energy
16 policy? Consider renewable energy portfolio
17 standards across the country and where North
18 Carolina ranks. Hawaii is at 40 percent by 2030;
19 California at 33 percent by 2020; Colorado at
20 30 percent by 2020; and New York at 29 percent by
21 2015. Minnesota, Nevada, New Hampshire,
22 Delaware, Illinois, and West Virginia have set
23 standards in the mid 20 percentiles. Two dozen
24 other states have set standards at nearly twice

1 the 12.5 percent that our state requires. So, if
2 we have the technology, the demand for the
3 thousands of new jobs that are and will be
4 created by moving to greener energy production,
5 if we have the entrepreneurial will, if we have
6 weather catastrophes waiting to happen due to
7 warming temperatures, if we have a strong
8 grassroots clean energy movement stretching from
9 Murphy to Manteo, if we have general disgust,
10 anger and grief with the behavior of Duke and the
11 Legislature regarding wholly, inadequate
12 responses to coal ash conditions, if we have
13 erstwhile Duke employees now at the very highest
14 levels of state leadership who are not above
15 withholding from the general public their varied
16 connections to Duke, and if there is universal
17 resentment at seeing CWIP legislation influence
18 our monthly bills, then surely, Commissioners,
19 now is the time to act on behalf of our 10
20 million residents. After all, electricity is an
21 essential of life. We should not be held captive
22 to this corporate bully.

23 And regarding our coal ash
24 conditions, I must add that on Friday last DENR

1 issued a draft permit, and I quote directly from
2 yesterday's N&O, that "would add '12 potentially
3 contaminated groundwater seeps' in the dumps
4 earthen dam to Riverbends allowed discharges, the
5 very same leaks cited as violations last month".
6 This condition exists because Duke holds to its
7 extraction model, a model that the Utilities
8 Commission should and must challenge in its
9 evaluation of this IRP.

10 Duke does not have the best
11 interest of our environment and ratepayers in
12 mind. Its 2015 IRP is stitched to an abusive,
13 build new plants, use ratepayers as cash
14 machines, model. If Duke is a regulated
15 monopoly, by golly, regulate them. Better yet,
16 evolve beyond monopoly status, permit third party
17 sales and give us some choice. Thank you.

18 Q Mr. Phillips, I note that both you and a previous
19 witness said that you found in Duke's Integrated
20 Resource Plan a statement that in 2029 they would
21 only produce 4 percent renewable power. And
22 since the statute requires Duke to produce 12.5
23 percent, how can you say that in their -- where
24 in their Integrated Resource Plan do you contend

1 that they've said they will only produce 4
2 percent?

3 A It's my -- I got my information from NC WARN,
4 from a group of Talking Points that WARN produced
5 after reading thoroughly Duke's 2015 IRP.

6 Q And so you don't know of your own knowledge that
7 they are confessing an intent to violate the
8 statute?

9 A I do not, sir. I did not read it thoroughly and
10 cannot make that claim.

11 MR. GILLAM: Thank you.

12 COMMISSIONER BEATTY: Questions from other
13 parties? Questions from Commissioners? Commissioner
14 Bailey.

15 EXAMINATION BY COMMISSIONER BAILEY:

16 Q Good afternoon, Mr. Phillips. Thank you for
17 being here. You may have said this and I just
18 missed it. What do you recommend that we ought
19 to have from a penetration standpoint of
20 renewables in the State of North Carolina?

21 A When you say penetration, you mean what --

22 Q Yeah, how much should our power come from
23 renewables in the state?

24 A Well over time I'd like to see us move toward

1 about 30 percent by 2030.

2 Q Okay. Is that the cap or do you think it should
3 go higher than that?

4 A As high as it can possibly go. You know, when I
5 mentioned a minute ago that we have the
6 technology, we have the entrepreneurial will, we
7 have the resources, we have the technology, we
8 have the expertise, we have the trained people to
9 transition away from an extraction model toward a
10 renewable energy model. There are jobs waiting
11 there and we certainly have the knowledgeable
12 people to lead that transition.

13 Q Should nuclear energy be part of that mix or not?

14 A Well, you know, there are dangers associated with
15 nuclear energy from my perspective. Speaking as
16 a ratepayer, my understanding is that Wall Street
17 would not bankroll Duke's desire to build new
18 nuclear plants and that was motivation for the
19 2007 CWIP legislation, Construction Work in
20 Progress, that would put onto the shoulders of
21 ratepayers the cost of building new nuclear
22 plants. Disturbingly, many other states
23 experience overruns and predictable delays and
24 sometimes abandonment of those building plans.

1 So it just seemed like a bad idea.

2 COMMISSIONER BAILEY: Thank you, sir.

3 COMMISSIONER BEATTY: Questions from other
4 Commissioners? Follow-up, Mr. Somers? Questions from
5 the Commission's questions?

6 MR. SOMERS: I have a question.

7 COMMISSIONER BEATTY: All right.

8 EXAMINATION BY MR. SOMERS:

9 Q Mr. Phillips, good evening. You mentioned that
10 in response to an earlier question that you had
11 been provided information from NC WARN about the
12 amount of renewables that were in the Duke Energy
13 Carolinas or Duke Energy Progress IRPs; is that
14 correct?

15 A Correct.

16 Q What information were you provided by NC WARN?

17 A Provided that Duke will produce renewable energy
18 that amounts to 4 percent by 2029 and energy
19 efficiency by 5 percent. Additionally, it's my
20 understanding that to meet that 12.5 percent
21 standard that it will buy in from out-of-state
22 sources energy produced by renewable sources to
23 meet that standard.

24 Q Have you read the Duke Energy Carolinas or Duke

1 Energy Progress IRPs yourself?

2 A I did not have access to it and -- I have had
3 access to it before. You know, frankly, a lot of
4 the language is beyond my understanding.

5 MR. SOMERS: Okay. Thank you.

6 COMMISSIONER BEATTY: Thank you very much,
7 Mr. Phillips. We appreciate you coming this evening.

8 MR. PHILLIPS: Yes, sir.

9 (The witness is excused.)

10 MR. GILLAM: Stuart Glover.

11 STUART GLOVER; was duly sworn and
12 testifies as follows:

13 DIRECT EXAMINATION BY MR. GILLAM:

14 Q Please state your name and address for the
15 record.

16 A Yes, sir. My name is Stuart Glover. I live at
17 Highway 42 East in Wilson. The address is 4343,
18 zip code 27893.

19 Q Now, do you get your electric service from the
20 City of Wilson?

21 A I get my Duke Power through NCEMPA through the
22 City of Wilson, North Carolina distribution
23 system.

24 Q Okay. Do you have a statement to make tonight?

1 A Yes, I do.

2 Q Please proceed.

3 A I would like to ask the Commission if you have
4 recently done a mission analysis of what your
5 mission is? There is a question in my mind -- if
6 you have done a mission analysis, then I would
7 question why we are having all the problems that
8 we're having with the coal ash issue because coal
9 is the most expensive commodity you can use when
10 you consider the life cycle cost of coal as a
11 fuel.

12 My second concern is that I live
13 on a farm and for some time now we've been trying
14 to put -- we have a couple of 100 acres that are
15 not in production right now and we've been trying
16 to put in a solar farm for quite a while. And
17 evidently the portfolio standard has been
18 saturated and there's no interest in the power
19 providers, the major power providers, Duke and
20 Dominion here in North Carolina, to allow the
21 expansion of the solar industry for people who
22 have assets to put toward solar. And so I'd like
23 to -- I'd like for the Commission to look into
24 that. And what are the requirements to increase

1 that standard because I'm not the only one in
2 North Carolina who would like to put in a solar
3 farm? And I think it's this portfolio standard
4 issue that's the bottleneck to providing the
5 opportunity, not only for more family farms to
6 get involved but to provide more carbon offset.
7 Subject to your questions, that concludes my
8 portion of my comments.

9 Q Well, I think I've got to ask one more question.

10 COMMISSIONER BEATTY: Mr. Gillam, could you
11 please move the microphone closer to you. Thank you.

12 Q (MR. GILLAM) Are you aware that at the same time
13 someone is telling you that the REPS has been
14 saturated that Duke Carolinas and Duke Progress
15 are both making large purchases of either solar
16 energy from a plant operated by someone else or
17 purchases of solar plants that they will operate
18 and request for approval of these purchases are
19 now before the Commission?

20 A I am to the tune of I think over \$500 million,
21 yes, this year -- this and next year, I believe;
22 yes, I am. But that's only a minuscule amount of
23 the power requirement that we need to improve the
24 atmosphere and to take care of mother earth

1 because renewable energy is the future and that's
2 what this is all about. And I don't understand
3 why there's such a constraint on the portfolio
4 standard.

5 Q Well, I'm not taking issue with you on that
6 either way, but I'm just asking was it someone --
7 was it to your understanding someone from Duke
8 that said that the REPS were saturated at this
9 time when they are seeking a lot more solar
10 power?

11 A Well I'm pretty well insulated from Duke. By the
12 time I get through with the City of Wilson
13 distribution and NCEMPA, I'm pretty much
14 handcuffed right there.

15 Q Oh, so it was --

16 A (Interposing) NCEMPA.

17 Q -- NCEMPA was saying that it was saturated from
18 their perspective?

19 A Right.

20 Q Okay. Thank you.

21 A And I have the same information from Dominion,
22 also.

23 COMMISSIONER BEATTY: Other questions from
24 any of the parties? Questions by Commissioners?

1 EXAMINATION BY COMMISSIONER BAILEY:

2 Q Is it Mr. Glover? Is that correct?

3 A Yes, sir.

4 Q Thank you for being here tonight. I just -- I
5 need to I guess phrase this in a question format.
6 Are you aware of what the Public Staff does for
7 the consuming public in the State of North
8 Carolina?

9 A Yes, sir, and they have been and continue to be a
10 lot of help to me even though I am a victim, I'll
11 call it, of an unregulated public utility. Yes,
12 the Public Staff has some great Americans in it.

13 Q I would strongly suggest that you talk to the
14 Public Staff because we -- on every Monday
15 morning we're approving 50 to 200 megawatts worth
16 of solar farms in the State of North Carolina and
17 it's continuing.

18 A Well, thank you very much, sir. I would ask,
19 also, as a continuing question on that, if you
20 all have any influence in the Legislature to
21 let's update General Statute 159 and let's all
22 become a customer of Duke. Let's get NCEMPA out
23 of the picture.

24 COMMISSIONER BEATTY: Thank you very much,

1 Mr. Glover. We appreciate you coming out this
2 evening.

3 MR. GLOVER: Thank you, sir.

4 (The witness is excused.)

5 MR. GILLAM: Bob Rodríguez.

6 MR. RUNKLE: Chairman Beatty, while the
7 witness comes up, I was still a little confused about
8 a line of questions to Mr. Phillips who was the
9 witness before that talking about what Duke's plans
10 were for 2029. I mean, on both 39 -- page 39 of the
11 IRPs for both Duke Energy Carolinas and Duke Energy
12 Progress has a piechart showing the growth of both
13 energy and capacity, and I think they say what they
14 say. And whether the witness was aware of this from
15 Bob's question here, I was just confused of what the
16 line of questioning was all about.

17 COMMISSIONER BEATTY: Well, we've passed
18 that witness.

19 MR. RUNKLE: So I just offer that you look
20 at page 39 of the IRPs to find out what the answers to
21 the question would have been.

22 COMMISSIONER BEATTY: Thank you, sir.

23 ROBERT RODRIGUEZ; was duly sworn and
24 testifies as follows:

1 DIRECT EXAMINATION BY MR. GILLAM:

2 Q Good evening, Mr. Rodriguez. Would you state
3 your name and address for the record?

4 A Absolutely. My name is Robert Rodriguez,
5 R-O-D-R-I-G-U-E-Z. I live at 2400 Countrywood
6 Road, Raleigh.

7 Q Do you receive power from Duke Energy Progress?

8 A Duke Energy Progress; that is correct. Sir, yes.

9 Q Do you have a statement?

10 A Yes, I do.

11 Q Please make it.

12 A First of all, Chairman Finley, Commissioners,
13 counsel on both sides, as a concerned citizen, as
14 a member of the Leadership Council for the North
15 Carolina Interfaith Power and Light, which is a
16 program of the N.C. Council of Churches, a
17 businessman, a shareholder, and utilities
18 customer, I am asking you all to consider the
19 moral imperatives and the impacts of the latest
20 Integrated Resource Plans from Progress and Duke
21 Energy.

22 Upon review, there have been many
23 positive changes. In particular, programs
24 dealing with energy efficiency and conservation

1 for residential and commercial customers,
2 continued efforts to increase the amount of
3 renewable energy sources in the IRP, and an
4 effort to clean up the Dan River and other coal
5 ash sites across North Carolina.

6 However, there's still a great
7 deal of work that still needs to be done. What
8 needs to be happening in an increasing manner is
9 implementing a larger scale, scope and pace for
10 energy efficiency and conservation, along with
11 demand-side management, as the fastest least cost
12 method for obtaining power. Also, there needs to
13 be a concerted effort for championing combined
14 heat and power, continuing to integrate more
15 renewable energy powering to the generation mix,
16 beginning the process of working with storage
17 technologies for both utility grade and
18 residential customer and, finally, working on the
19 retirement of all coal plants in the coverage
20 area.

21 Some very disruptive trends are
22 showing themselves which will have major power
23 generation implications. And I speak from
24 experience from knowing that disruptive power or

1 disruptive trends can take what you once knew in
2 a course of one or two years and completely turn
3 things upside down.

4 First, the entry and race for
5 improved storage, batteries of vary types, and
6 not only for the utility grade applications but
7 for residential. This comes from a number of
8 people who are not traditional players in the
9 market. In particular, Tesla, Google, Apple
10 along with Ambri Battery and another company here
11 locally Alevo, Incorporated, which is located in
12 Concord, North Carolina, are some key players
13 working on -- in this sector, working on some new
14 battery technology which, quite frankly, is going
15 to be a game changer or a part of a group of
16 companies that are going to make significant
17 changes in the next three to five years.

18 Energy storage and release of this
19 power is already being implemented in a much
20 smaller scale. I can speak with a knowledge of
21 this in the wireless communication industry
22 today. If you have a cell phone, battery life is
23 everything. And the technology to be able to
24 drive to pull every single jewel of energy out of

1 this thing is already being implemented. And
2 what's happening is is something that's kind of a
3 cross-fertilization from one industry is going to
4 others. So it's amazing that now the biggest
5 draws are not so much the power amplifiers but
6 it's other ancillary circuits in the cell phone.
7 But you'll soon see phones that are going to be
8 able to do things that you couldn't believe, but
9 the same technology is going to transfer over
10 into power generation, storage in particular, and
11 I think that's the place where I'm seeing -- this
12 is about -- this is going to happen.

13 The other area of disruption is
14 the continued demand for adding solar energy. The
15 cost of solar has dropped. The amount of -- the
16 ease of being able to finance these projects
17 makes sense. And, basically, if anybody here is
18 a parent whose got a middle-schooler, you know
19 the amount of time for payback is basically the
20 time you're looking at a middle-schooler thinking
21 of high school you've already paid back most
22 projects. Now, most projects could be paid off
23 long before then. So anybody thinking of college
24 for your kids, I guess you could use that as an

1 analogy. You'll have already paid it off long
2 before that time. So this is a trend. The
3 dropping of the cost of solar, the
4 implementation, the adoption has been
5 breathtaking.

6 And, also, the change in
7 architecture. The amount of significant changes
8 in terms of reduction of consumption of
9 electricity and water and how this has been
10 coupled with the enhancement of comfort and
11 performance has been moving quickly. If you talk
12 to any Realtor, they'll tell you that the homes
13 that are moving are the ones that are most
14 efficient, that carry about an 8.5 percent
15 increase, and this is from the NC Realtors.
16 They'll be the first one to tell you Energy Star
17 lead for homes because people like to have
18 something they know is going to be less expensive
19 to run, to operate, and yet still provide comfort
20 for themselves and their family.

21 So all these things are coming
22 together for a major tipping point and I think
23 that it's something that's going to have to be
24 considered above and beyond what the normal

1 considerations for generation of power.

2 I also want to mention the fact
3 that it's hard to believe it's already been a
4 year since the Dan River coal ash spill occurred.
5 It's brought a tremendous amount of attention
6 again in terms of the legacy of the way we did
7 things in the past. I also think that it's hard
8 to believe it's been four years since
9 Fukushima-Daiichi also had the meltdowns occur.
10 And that, still to this day, there's no real way
11 of stopping the highly radioactive waters from
12 entering the Pacific Ocean, contamination in that
13 area, and that the cleanup is probably going to
14 take decades. So this points out the fact that,
15 although in the IRP, nuclear power was mentioned
16 as the best non-carbon source of power. I would
17 have to say that there is still carbon associated
18 with it, in particular, with the mining, milling,
19 and enrichment of the uranium, but also the fact
20 that energy must be kept in maintaining and
21 sequestering or basically holding those spent
22 nuclear fuel rods from ever, God forbid, ever
23 having the same kind of problem that we had in
24 Fukushima.

1 The other thing I would like to
2 mention is that technology takes a huge amount of
3 water for cooling. And we've been lucky the last
4 few years, but for those of us who remember the
5 2007 drought and how that made impact for power
6 generation in the entire southeast; this is
7 something that must be considered. I think the
8 fact that the extremely high upfront capital
9 costs and that we are -- as we are observing with
10 the Vogtle site in Georgia, with cost overruns
11 and delays, is again a continuation of that same
12 legacy. So, you know, the final take away here
13 is that -- and having worked as a business guy
14 and in engineering, and an engineer probably
15 almost 40 years now -- the one thing I can tell
16 you true is that all systems that are built by
17 humans, be it mechanical, electrical or human
18 systems fail some time, and unfortunately,
19 nuclear power can never have a bad day ever.

20 So it's from this perspective I
21 want to bring up a couple of things in terms of
22 the urgent sense of urgency and I want to cite
23 how we have to move away from what we've done in
24 the past. It's convenient, you know, you do what

1 you're comfortable with. It is always a
2 challenge to change the status quo. And so what
3 I'm going to do here is help provide some
4 examples as to why that's an imperative.

5 First, I'm going to cite the
6 report, a recent report by the Annals of New York
7 Academy of Science: The ISSN number -- and I'll
8 hand this in, too -- 0077-8923, it's entitled the
9 Full Cost Accounting for the Life cycle of Coal.

10 And what this study did is it basically
11 conservatively estimates the cost of coal
12 burning, mining, disposal, all the components of
13 extraction, and also the components of the
14 impacts on the watersheds and biosphere and
15 biodiversity somewhere between \$333 to \$500
16 billion a year. This is also including health
17 costs that are related and cumulative to all
18 people who basically breathe air or live near
19 communities that burn coal.

20 The other report I'll mention only
21 in brief passing is the recent IPCC report, which
22 again brings home the point that we really need
23 to change our power generation systems at a pace
24 as if our long-term survival really mattered.

1 So let me be specific about some
2 things I've seen in the IRP that I, you know, in
3 regards to -- have opportunities for improvement.
4 In going to page 39 on the Graphs 8C and 8D, and
5 I like how it was broken out, that you had joint
6 planning graphs and you had each individual
7 utility. I'm citing Graph 8C here. We have
8 levels -- so this is for the joint planning 2029
9 IRP generation plan for DEC -- Duke Energy
10 Carolinas and Duke Energy Progress is made up of:
11 Energy efficiency 4 percent; renewable energy 4
12 percent; hydroelectric 8 percent; demand-side
13 management 5 percent; nuclear 26 percent;
14 combustion turbine 14 percent; coal 20 percent;
15 and combined cycle 18 percent.

16 So now, again, this is -- I did
17 the best using those graphs -- so from my
18 recollection or my reckoning here, that means
19 that at least about 52 percent of that capacity
20 is still going to be fossil-based. Although
21 combined cycle and natural gas is definitely
22 cleaner and does not leave the legacy of
23 pollution that coal does; however, that's still a
24 fair amount of -- that's still a fair amount of

1 capacity, generating capacity.

2 So what I'm going to do is compare
3 and contrast. If you looked at the State of
4 Vermont, which has already been mentioned before
5 I believe by Mr. Friedman, Efficiency Vermont in
6 2013 was able to garner about 13.1 percent of its
7 generating capacity from energy efficiency. So
8 I'm thinking that the Vermonsters -- I know a few
9 Vermonsters and they're good folks, but I can't
10 think that we, in North Carolina, can let them
11 almost triple what we can do here in this state.
12 I think we are fully capable of doing that.

13 Germany, in 2014, as a country obtains about 27
14 percent. They moved that up from the year before
15 from like 24 percent of its power from renewables
16 with an astounding peak recorded on May 14, 2014
17 of 74 percent of the entire country's generating
18 capacity used by renewables that day. Another
19 example is Denmark which obtains 52 percent of
20 its power from combined heat and power along with
21 an additional 20 percent from their wind
22 generation. I think that's a little bit low. I
23 think it's come up actually since then. Yet they
24 are committed to increase their mix of renewables

1 even higher than that.

2 The National Academy of Science,
3 this is in 2012, reports that in the U.S. we have
4 an opportunity between 25 to 31 percent savings
5 can be used through energy efficiency. Now, of
6 course, is it going to be implemented in
7 different ways? You know, there's aspirational
8 and also what may be more realistic, but still
9 that's a lot higher than what we're getting in
10 about 15 years from now.

11 Currently, North Carolina gets
12 about 5 percent of its total power from combined
13 heat and power. Yet if I were to cite an Oak
14 Ridge National Labs study -- this is August 12,
15 2012, it's up on the web -- basically they're
16 saying it's technically and economically feasible
17 to move to around 16 percent - this is
18 nationwide. And that for North and South
19 Carolina, they identified about 3000 megawatts of
20 power which could be moved upwards toward
21 somewhere from the 5 percent now to closer to 17
22 percent so essentially the low-hanging fruit
23 here.

24 And then, in regards to Germany, I

1 mean I work for a German company -- I've said
2 this before -- and I can tell you that their
3 aspirational goal is 80 percent renewable by
4 2050. Working for those guys, I also can tell
5 you from firsthand experience, they are extremely
6 aware of the implications, not only for
7 themselves but the issues of weather, the issues
8 of climate and, God forbid, anything should ever
9 happen to the Gulf stream because those guys know
10 they would be in deep yogurt for that. But they
11 also view this as a tremendous opportunity for
12 change and they also view it as a new way of
13 doing business, a new way of breaking the status
14 quo. And they have been able to capitalize on
15 that by photovoltaic solar hot water, wind,
16 biogas, the Passivhaus approach of basically near
17 zero -- near energy -- let's see near zero energy
18 homes. Basically passive homes which are using
19 no power for cooling and heating in addition to
20 systems thinking and their district power
21 management. So the good news is that they're
22 doing it.

23 There's a lot of good news here in
24 the U.S. I will cite the Rocky Mountain

1 Institute's work with the guys in the, what was
2 it here, the Empire State Building with a deep
3 retrofit where they were actually able to save 40
4 percent; to reduce energy consumption for an
5 81-year old building by 40 percent. So this is
6 giving an idea of what we can do, I think,
7 aspirationally as a community but also we're
8 asking our Progress Energy, Duke Energy, Duke
9 Energy Progress what more they can do from other
10 examples around the world. I think closer to
11 home we can also see how, as I mentioned before,
12 energy efficient homes. The other aspect is
13 water efficiency. Through energy you need to
14 move water. The ability to do that is also
15 coming into play. The local efforts by local --
16 by solarized programs like Solarize Durham,
17 Chatham, Raleigh, just to name a few, are
18 encouraging families to join the solar wave. And
19 as a point of reference, my own family will be
20 joining that same wave with a 4.3 kilowatt array
21 which will be installed later this spring.

22 So I think what it kind of boils
23 down to is that the reason we're doing this is
24 because of our love of the natural world, our

1 love of community, and we have a moral obligation
2 to walk the walk as we talk the talk. And we
3 also realize that this is not just for us, that
4 this is also setting an example for others. The
5 fear that maybe that this can't be done, well it
6 can be and I think we need to mobilize as many
7 people as possible to do this.

8 Again, I think it was earlier said
9 that this is not a question of technology, it's a
10 question of will. And really we do not want to
11 wait until the 11th hour to try to make a change.

12 So I think, in closing, I want us
13 to remember that this is not just human
14 communities we have to worry about. We also have
15 to worry about taking care of creation, the
16 impact on the natural world; how this is going to
17 affect the very systems that keep us alive; and I
18 think that's kind of a -- unless somebody can go
19 today, can tell me or show me that they can stand
20 outside, raise their arms, feed themselves with
21 the sun, then we need the natural world, and we
22 are not doing a very good job of taking care of
23 that, taking care of essentially our mother, our
24 father who is caring for us. And we have to

1 think -- even though as business people and as
2 scientists we have to think about -- this is the
3 only planet we have. This is the only place we
4 have. So I know the decisions we all make,
5 myself included, whenever I turn on a switch,
6 there's a community in Appalachia that feels the
7 effects of mountaintop removal. I can't let my
8 nieces and nephews go fishing or eat the fish --
9 they can go fishing but they can't eat the fish
10 because unfortunately of the mercury
11 contamination for certain size fish and for them
12 by their age. There are indigenous communities
13 that are paying the price for uranium mining.
14 And there's communities out west, northeast and
15 even in Lee, possibly Lee and Chatham County, we
16 might have our neighbors losing their aquifers to
17 hydraulic fracturing for natural gas production.

18 So these externalized costs really
19 have to be taken into consideration. I know the
20 system does not make that amenable. They don't
21 like to do it. But I think there's a place and
22 time it has to be done. I know the legislature
23 is a big part of this. But we, the people, also
24 are asking, not asking, we're demanding this.

1 This has to be done because poisoning ourselves
2 for the future makes no sense at all. That's not
3 good for anybody.

4 So I think -- in my final
5 statements here I just want to say that there's a
6 lot of good stuff that's going on. But I think
7 the other thing, too, is they've got to realize
8 that the choices we make also have to be done
9 with nature in concert. And one of the things is
10 that our renewable sources do not require great
11 deals of, if any, water. And we have really been
12 lucky without being able to dodge the bullet of
13 any droughts. But we know it's coming back again
14 and thinking ahead is the thing that we,
15 hopefully, our big brain is going to
16 differentiate us from other animals. But maybe
17 in their final analysis it turns out it really
18 wasn't as big a help as we thought, but I'm an
19 optimist, I think we can.

20 So my deep concern and my closing
21 statement is that we don't keep going down
22 business as usual. That was mentioned before in
23 terms of trying to capture costs and business as
24 usual that, you know, the issues with very

1 expensive power plants is the fact that if we
2 were to allow almost a simulation to say let the
3 customer know if we do this, it's going to cost
4 you guys this. I tell you what, if people knew
5 that their bills were going to double or triple,
6 you'd all of a sudden see people very interested
7 in energy efficiency. They would be interested
8 in renewables. Because when I'm -- my biggest
9 fear is that we get into this desk spiral - as
10 more people pull away, the rate base contracts,
11 those that do it, those people that are left have
12 to pay more so those who can't will start
13 continuing to pull out so, before you know it,
14 you could lose maybe 30 or 40 percent of your
15 base.

16 From personal experience in a
17 different industry, I have had -- I had to do the
18 calculation because I didn't believe it myself.

19 COMMISSIONER BEATTY: Mr. Rodriguez, I heard
20 you say three or four times now these were your
21 closing --

22 A Oh, I'm sorry, this is really it. I'm sorry. You
23 are correct, Commissioner. So know I've had my
24 business collapse by -- the calculation was 400

1 percent. So it just literally, literally in the
2 course of two years. So it is not fun. It is
3 truly focusing and an eye-opening experience, but
4 it was a technological shift. And when things
5 happen that you see are going and people and
6 customers demand it, if you don't do it, they
7 will find a way to do that.

8 So, Chairman Finley,
9 Commissioners, I ask you all to be bold. I ask
10 you to forge a path which has already been laid.
11 There's examples that have been laid out by
12 others. They have been done. We can do this.
13 So I want you all to be able to continue to
14 champion the things for the people, energy
15 efficiency, renewable energy, combined heat and
16 power, and to help you break ground that will
17 better serve all the people in North Carolina for
18 now and for generations to come. Thank you,
19 Commissioner, and that really is my last
20 statement.

21 COMMISSIONER BEATTY: Thank you, sir.

22 Q (MR. GILLAM) Mr. Rodriguez, I think I'm going to
23 have to ask you two or three questions more.

24 A Yes, sir.

1 (Court Reporter requested
2 Mr. Gillam to speak up.)

3 MR. GILLAM: Maybe it's this microphone.

4 COMMISSIONER BEATTY: Just a little closer.
5 There you go.

6 MR. GILLAM: I'm practically on top of it.

7 Q (MR. GILLAM) You made reference to those pie
8 charts on page 39 of the --

9 A (Interposing) Yes.

10 Q -- IRP.

11 A Yes, I did.

12 Q And I represent to you that in the break between
13 witnesses, Mr. Runkle showed me a copy of that
14 page and it does show that for one of the Duke
15 utilities in 2029 they will be getting only 4
16 percent of their power from renewables. And if I
17 read it right, for the other Duke utility, either
18 Progress or Carolinas, they would be getting only
19 1.5 percent. Now there may be some explanation
20 for that, I don't know, but I have to say that I
21 apologize for my skepticism to the previous
22 witness.

23 A You read the same graph, I mean, that's what I
24 looked at so. I gave the higher number really so

1 I went with that.

2 Q My only other question is did you say that you
3 had some materials to present other than just
4 your typed testimony?

5 A No, I do not. I do reference other reports for
6 reference from that but I don't have anything
7 else to hand in.

8 MR. GILLAM: Okay. Thank you.

9 COMMISSIONER BEATTY: Questions from other
10 parties? Questions from Commissioners? Commissioner
11 Patterson.

12 EXAMINATION BY COMMISSIONER PATTERSON:

13 Q In your research of German utilities --

14 A (Interposing) Yes, sir.

15 Q -- did you do any comparison of German utility
16 rates with those in North Carolina?

17 A They're higher; they're definitely higher. They
18 pay more than we do. Yet it's -- I'm trying to
19 think in terms of -- so for the solar feed in,
20 the feed in tariff, they basically get the
21 equivalent of like basically \$.50 per kilowatt
22 hour and they are paying -- I did not look at the
23 latest thing -- I'm going to say it's at least, I
24 would say somewhere in the order of double what

1 our rate is, but the point is it's kind of
2 relative to that. They've been able to do the
3 solar installation, their wind installation --
4 the big thing has been energy efficiency
5 buildings but I would have to -- no, I tell you
6 what, Commissioner, I could look that up pretty
7 quick, but anyway.

8 COMMISSIONER PATTERSON: I'm familiar with
9 it.

10 COMMISSIONER BEATTY: Questions from other
11 Commissioners? Commissioner Bailey.

12 EXAMINATION BY COMMISSIONER BAILEY:

13 Q Good afternoon, Mr. Rodriguez. Thank you for
14 being here. Just one question. Based on your
15 comment about fracturing or fracking --

16 A Yes, sir.

17 Q Do you think it's not possible to frack without
18 contaminating aquifers?

19 A I don't know. I think right now the track record
20 of what we've seen is that if it was so simple
21 and easy then we would not hear anything about
22 people who's -- I've actually met people who have
23 actually had their homes and actually had their
24 water contaminated, and I think the challenge is

1 that it is way too early in that technology. We,
2 as a state, especially with the type of geology
3 we have, don't even -- aren't even in the -- meet
4 the perfect profile for that. I would say we're
5 going to find out in 20 to 30 years that it was
6 not a good idea. There may be some places it
7 could be done, but I tell you what I know, there
8 are a lot of Pennsylvanians and a lot of folks
9 out west who are paying the price for that,
10 unfortunately. My concern is our neighbors here
11 in Lee County and Chatham County as well.

12 COMMISSIONER BAILEY: Thank you.

13 COMMISSIONER BEATTY: Questions from other
14 Commissioners? Thank you very much, Mr. Rodriguez.
15 Thank you for coming in this evening.

16 MR. RODRIGUEZ: Thank you, Commissioners.

17 (The witness is excused.)

18 MR. GILLAM: Mac Legerton.

19 MAC LEGERTON; was duly sworn and
20 testifies as follows:

21 DIRECT EXAMINATION BY MR. GILLAM:

22 Q Would you state your name and address for the
23 record, please?

24 A I'm Mac Legerton. My address is Post Office Box

1 9 in Pembroke, North Carolina.

2 Q From whom do you receive your electric service?

3 A I receive my electricity from Lumbee River EMC
4 that purchases electricity from Duke Power.

5 Q Do you have a statement you'd like to make?

6 A I do.

7 Q Please make it.

8 A Members of the North Carolina Utilities
9 Commission and the public, I am Reverend Mac
10 Legerton, a citizen of Robeson County, North
11 Carolina, and I serve as Executive Director of
12 the Center for Community Action. I've served in
13 this capacity for 35 years, and our center has
14 coordinated environment protection and promotion
15 programs since 1984.

16 Robeson County is host to two of
17 the coal ash ponds in the state that have been
18 upgraded to high priority but are not yet on the
19 list to be closed and moved. Since the coal ash
20 spill into the Dan River, the use of coal as a
21 source of energy in North Carolina has
22 fundamentally changed. We now know that a safer,
23 more costly method of coal ash management was
24 neither utilized nor factored into the cost of

1 burning coal over the past 70 to 90 years in our
2 state. And now we, as a state, all find
3 ourselves facing a serious dilemma, and our
4 dilemma is three-fold in this area.

5 The first question is how do we
6 safely manage coal ash in a way that protects the
7 people of our state and the places where we live?
8 Second, how do we factor in the full cost of
9 using coal for electricity now that we know the
10 price of managing its waste is much more costly?
11 And, third, how do we use this full cost of coal
12 to change our evaluation of the economic benefit
13 of it as a source of electrical power? And when
14 its full cost is included and evaluated, not only
15 the cost of coal ash management but also its cost
16 to the air, the water, and the land, and all of
17 its processes, coal will most likely become the
18 most expensive source of electricity rather than
19 its cheapest. And, you, as the North Carolina
20 Utilities Commission, are charged to support the
21 least costly methods of utility production.

22 So, therefore, I make the
23 following recommendations that the Integrated
24 Resource Plan be returned to Duke Energy and

1 approval withheld until evidentiary and public
2 hearings are held to address the following
3 recommendations as well as others made at this
4 hearing that relate to other issues such as
5 renewable energy and the fracking procedures and
6 others. One, that Duke Energy do an extensive
7 evaluation and report on the full cost of using
8 coal as an energy producer and that the plan
9 include a method of the phasing out of coal and
10 the cost of doing that completely over the next
11 15 years. Second, that the North Carolina
12 Utilities Commission request that Duke Energy
13 assess the cost to manage coal ash in these two
14 major ways: One, recycling as much as possible
15 as they are doing in Europe making cement and
16 other products, creating a new revenue source
17 that will significantly reduce the amount of
18 stored waste remaining after recycling; and, two,
19 the cost of storing the remaining ash using the
20 same method that Duke Energy presently uses for
21 most of the low-level radioactive wastes stored
22 in our state, the storage of the coal ash waste
23 at nuclear power plant facilities in
24 above-ground, monitored, retrievable storage

1 units at the nuclear power plants.

2 This is the most viable, safest
3 solution on managing coal ash that is already
4 being used by Duke Energy to monitor and store
5 much more dangerous waste. It would also
6 alleviate much of the transportation problem
7 because their -- their nuclear waste facilities
8 are at many of the places near where the coal ash
9 is located. It will also reduce the security
10 question because these facilities are already
11 secure from the public and from possible
12 terrorism. This method also removes the
13 collision course that we are now on between --
14 and costly years of litigation which means that
15 the management of the coal ash will be postponed
16 until the end of that costly litigation, and the
17 cost of litigation to the state and to one of our
18 private businesses and to the public between
19 state government, Duke Energy and the citizens of
20 our state regarding coal ash management. And,
21 third, upon completing this assessment of these
22 economic costs, the development of plans and
23 reports and waste management methods, that Duke
24 Energy present the revised IRP for public and

1 Commission review.

2 And, finally, I believe that North
3 Carolina has the opportunity to be a leader and
4 model in safe, healthy, affordable, renewable
5 energy. And as a preacher, if I was preaching on
6 this, the acronym for that is SHARE: Safe,
7 Healthy, Affordable, Renewable Energy. We have
8 the resources in the state to do this and we need
9 this Commission to be a leader in this effort. I
10 sincerely believe we have the public will. The
11 question is can we work with our friends at Duke
12 Energy and with this Commission to translate that
13 public will into political will to support us
14 becoming a model state and then we would see
15 major, very positive articles being written about
16 our state in the state and national media. And
17 people and businesses would be coming to North
18 Carolina to see how we have accomplished a major
19 policy and profit-making businesses that support
20 safe, healthy, affordable, renewable energy.

21 Thank you.

22 MR. GILLAM: Thank you. No questions.

23 COMMISSIONER BEATTY: Questions from any
24 other parties? Questions by Commissioners? Thank you

1 very much, sir. We appreciate you coming this
2 evening.

3 (The witness is excused.)

4 MR. GILLAM: Beth Henry.

5 BETH HENRY; was duly sworn and
6 testifies as follows:

7 DIRECT EXAMINATION BY MR. GILLAM:

8 Q Please state your name and address for the
9 record.

10 A Beth Henry, 3066 Stoneybrook Road, Charlotte,
11 North Carolina.

12 Q Do you get your electric service from Duke Energy
13 Carolinas?

14 A I do.

15 Q Do you have a statement to make tonight?

16 A I do.

17 Q Please do.

18 A I've been coming for several years now for the
19 same reason and that is that I am desperately
20 worried about global climate change. Over the
21 past seven to eight years, I've gotten to know a
22 number of the leading scientists and I just am so
23 worried about my children. That's why I started
24 coming. Now I have two grandchildren and I'm

1 just so concerned about what the future holds for
2 them.

3 For that reason, I would like to
4 ask y'all not to allow Duke to build so many more
5 gas-fired plants as are provided in the plan. I
6 know that they're supposedly cleaner than coal,
7 but in the short run -- which is what we really
8 do have to be worried about -- we don't have much
9 time. Methane is a much more powerful climate
10 pollutant than CO2. So I do not see gas as a
11 solution to the climate problem at all. But,
12 even if all we're worried about is the costs, I
13 think all these gas plants are a bad idea.

14 Y'all have probably all seen the
15 two articles that were in yesterday's *Washington*
16 *Post*. One was an op-ed by former FERC Chair, Jon
17 Wellinghoff, about how Virginia needs to focus on
18 energy efficiency and renewables, not gas. I
19 remember when Jim Rogers said "gas was the crack
20 cocaine of fossil fuels". And it looks like that
21 is about to happen again. Gas is cheap for now
22 but within the next decade, if the gas industry
23 gets its way, 14 export facilities are coming
24 online. So while gas may seem cheap now, it's

1 about to become a world commodity and it won't be
2 cheap anymore for us when the gas companies can
3 sell it. It costs three times as much in other
4 countries now and so it's just not even -- common
5 sense says it's going to be going way up. So I
6 think to invest so much in gas is a mistake even
7 if we're only concerned about the costs. But
8 then I'm also concerned about the climate impact.

9 But speaking of yesterday's
10 *Washington Post*, it also had a long article about
11 how the nation's utilities are on a huge campaign
12 against rooftop solar that began three years ago
13 when the nation's top utility executives gathered
14 at a Colorado resort to hear warnings about a
15 grave new threat to the operators of America's
16 electric grid; not super storms or cyber attack,
17 but rooftop solar panels. So it's a very
18 interesting article that I recommend. It tells
19 about how the utility executives were warned
20 about loss of customers, potential obsolescence
21 of the utilities. So it was a call to arms. The
22 utilities went to work. They first went to all
23 the state legislatures to try to hurt rooftop
24 solar, but that campaign failed spectacularly.

1 So now the battle has shifted to public utilities
2 commissions across the country where industry
3 backers have mounted a more successful push for
4 fee hikes that could put solar panels out of
5 reach for many potential customers. *The public*
6 *utilities commissions*, this is the Washington
7 Post, usually made up of political appointees
8 have enormous power and no one really watches
9 them. So that's why they explain that now the
10 attack on solar has moved to utilities
11 commissions.

12 And, of course, we all know what's
13 going on with rooftop solar here and, as someone
14 else mentioned, it's been blamed on needing to
15 protect the poor people. And I just think that
16 is a very cynical approach given what I know
17 about how our rates are determined. If all the
18 people who could afford, all the residential
19 customers who could afford rooftop solar could
20 get it, then the peak usage of the residential
21 class of customers would be greatly lowered which
22 would lower electricity costs for all residential
23 customers.

24 I happen to be living right now

1 with my sister who has had a bad accident. She
2 has cerebral palsy, MS, epilepsy, and she lives
3 in Section 8 housing in Clinton. And I was
4 helping her pay her bills the other day and her
5 electric bill for a tiny, little, one-room
6 apartment was \$175 and she does not keep it very
7 warm. So I don't think the system we have now is
8 protecting poor people. And if we would figure
9 out a way to allow all of our rooftops to be
10 covered with solar, the residential class as a
11 whole would not be harmed, it would benefit. So
12 I would urge you, again, primarily because I'm
13 worried about the climate, but also because it
14 does make sense for people like my sister, for
15 whoever is able to, in the residential class, to
16 be able to get solar.

17 And, finally, about the cost of
18 solar - a new report from the Bank of Abu Dhabi
19 just about investing in energy said that already
20 more than half of worldwide investments in new
21 electricity generation is in renewables and that
22 they are telling their investors that they think
23 almost all future investments will be in
24 renewables. So I really think that the 4

1 percent -- and I did see that in the plan, too --
2 is just painfully low given what the future
3 holds, and then we will be paying for all of
4 these gas plants as renewables keeps dropping
5 every year.

6 Solar has dropped dramatically. I
7 realize it's a difficult timing problem but we
8 need to just juggle it as best we can -- not to
9 invest so much in gas when by the time all these
10 gas plants or soon after they're all built --
11 solar with storage will end up being cheaper than
12 the gas plants.

13 Bottom line is, I feel like I'm
14 going crazy every time I come here because
15 there's so much detail and it's like we're
16 missing the point. If you look at the science,
17 our grandchildren may not be able to live on this
18 earth. There's so many really bad things that
19 they're now talking about that have a very good
20 possibility of happening. And the truth of it
21 is, y'all are basically the trustees for our
22 little part of the world. And everybody
23 everywhere is like, oh well, we can't do
24 anything, China is doing this; or we can't do

1 anything, another state is doing that. But the
2 truth of it is, like that *Washington Post* article
3 said, utilities commissions have a lot of power.
4 And y'all happen to be serving, you know, you
5 happen to hold the levers of power at a time when
6 we face a planetary emergency and a very narrow
7 window of time to solve it in the hopes of not
8 ruining the world for our children.

9 And so what I really want to ask
10 y'all to do is to take -- to think -- look
11 seriously at this science, you know, not at what
12 the pundits say, but at the real science, at both
13 the magnitude and the urgency of the climate
14 threat, and think about the tremendous power you
15 do have. We can't change the system in time. We
16 can't change the laws. We can't change -- we
17 can't do campaign finance reform in time to stop
18 the big corporate polluters from financing all
19 the candidates who write the laws. So,
20 basically, we're dependent on the people who are
21 now in power including people like y'all. You're
22 the present trustees of our little part of the
23 one world on which we all depend. And so, at
24 this unthinkable moment in time, I'm just calling

1 on y'all to do what you can to stop the think,
2 the short-term thinking that we all have now and
3 just do the best you can to be trustees of our
4 air, our water, our climate, for all of our sakes
5 and especially for the sakes of our children, and
6 grandchildren, and all children. Thank you.

7 Q Ms. Henry, I think you talked about how natural
8 gas was a worst greenhouse pollutant than coal.

9 A Well, in the short -- than CO2. Methane as a
10 climate forcing agent over say a 20-year period
11 is a much stronger climate forcer than CO2
12 although CO2 lasts a lot longer in the atmosphere
13 is my understanding.

14 Q Isn't that only true when methane seeps out into
15 the atmosphere unburned like it can from
16 landfills that does not flare their methane?

17 A Right or like it does -- really at just about
18 every stage of the process of using it.

19 Q You're saying that --

20 A (Interposing) Uh-huh.

21 Q -- you're saying that --

22 A (Interposing) Like from fracking and other
23 places where it leaks out.

24 Q You're saying that at every stage of the process

1 of burning methane for fuel for generation that
2 methane leaks out into the atmosphere unburned?

3 A I'm saying I think studies show that -- I know it
4 leaks out under my kitchen stove. I mean, it
5 leaks out in a lot of places. I, you know,
6 that's what a lot of the studies that are being
7 done right now about fracking are about is
8 exactly how much does leak out at various stages
9 of the process.

10 Q Well, are you talking about electric generation
11 or about fracking?

12 A I'm talking about our use of natural gas or
13 methane gas. I'm talking about using it, say,
14 instead of coal; that I don't think it's a good
15 solution to coal because it is also a fossil fuel
16 that fuels climate change.

17 Q You talked about using your gas stove; are you
18 saying that --

19 A (Interposing) I was just joking about that.
20 (Laughing.)

21 Q -- are you saying every time you turn on your gas
22 stove that unburned gas seeps out into your
23 kitchen?

24 A I'm afraid it is just from the smell, but I was

1 just trying to be funny. I mean, at a lot of
2 stages -- I've read studies done by people I
3 think at the Nicholas School about -- or
4 somewhere at one of our Universities here that --
5 Oh, and I've seen, you know, I've seen pictures
6 showing ultraviolet lights like of New York.
7 There's a lot of methane leakage. I'm not an
8 expert on that but I know a lot of it leaks out
9 and it's bad.

10 COMMISSIONER BEATTY: Mr. Gillam, we're
11 familiar with what she's talking about.

12 MR. GILLAM: One other question.

13 Q (MR. GILLAM) The *Washington Post* article where
14 you said that the utility leaders met and talked
15 about the threat from rooftop solar.

16 A Yes.

17 Q Who wrote that article?

18 A Let's see, I've got it here in my notes. I
19 was -- again, I'm sleeping on my sister's couch
20 in Clinton, North Carolina, and I was reading
21 this on her iPad last night. Let's see -- but I
22 did write down the -- okay, well the op-ed was by
23 John Well- -- oh, Joby Warrick was the --

24 Q (Interposing) Thank you.

1 A -- author of the *Washington Post* thing.

2 COMMISSIONER BEATTY: Other questions from
3 other parties? Questions by Commissioners?

4 (No response.)

5 COMMISSIONER BEATTY: Thank you very much,
6 Ms. Henry. We appreciate you coming from Charlotte.

7 MS. HENRY: Thank you.

8 (The witness is excused.)

9 COMMISSIONER BEATTY: Is this the last
10 listed witness coming up?

11 MR. GILLAM: Yes, it is.

12 COMMISSIONER BEATTY: Thank you, Mr. Gillam.

13 MR. GILLAM: Ken Moore.

14 KEN MOORE; was duly sworn and
15 testifies as follows:

16 MR. MOORE: Mr. Chairman and members of
17 the --

18 DIRECT EXAMINATION BY MR. GILLAM:

19 Q Excuse me, sir. Please first state your name and
20 address for the record so we'll know who you are.

21 A Ken Moore, M-O-O-R-E, and the address is 351 Old
22 Fayetteville Road in Chapel Hill 27516.

23 Q Do you receive electric service from Duke Energy
24 Progress?

1 A No, I don't, I receive it from Piedmont Electric
2 Membership Corporation.

3 Q Okay. Thank you and you may now proceed with
4 your statement.

5 A This is sort of interesting because I was at a
6 hearing in Hillsborough a couple of years ago,
7 and because I was not a member of Duke Energy I
8 didn't get to speak until the very end and
9 everybody had pretty much left. So at least
10 you're making most people stay.

11 You'll be relieved that I did not
12 come -- I really didn't come to plan to speak at
13 all. I came to morally support my good friend,
14 Harry Phillips, but after being here I do have --
15 I am speaking as a human being. I am not going
16 to hit you with facts and figures. I am so
17 honored to be here with all of these presenters
18 who have been most comprehensive in what they
19 have provided.

20 I am reflected of the first
21 presenter who described her taking her
22 granddaughter to see the, what is it the cat fish
23 or whatever, I couldn't hear what she said, but
24 the endangered species. And, quite frankly, I

1 think probably I may be, if not very close to,
2 the oldest person in the room. I'm very
3 fortunate that my wife and I are still very
4 healthy. I feel that I, myself, along with
5 everybody else in this room, we are endangered
6 species.

7 I spent my 35 years professional
8 life managing the Botanical Gardens over at the
9 University at Chapel Hill. So plants and animals
10 and education of adults and of mostly young
11 school children is very close and very much a
12 part of my concern. In fact, after I retired
13 over 10 years ago, I spent four years working as
14 a nature environmental guide for two different
15 organizations for kindergarten through fifth
16 graders. Quite frankly, I am -- I find it
17 incomprehensible that we, as a society, are still
18 discussing what we should be doing.

19 I'm just very happy that I'm as
20 old as I am. And I am sadly now relieved or
21 happy that I don't have any children and thus no
22 grandchildren although I will work with other
23 peoples' grandkids. I seriously believe that
24 they're not going to have -- As they grow up,

1 they're not going to grow into a world where
2 humans are going to be allowed to survive. So
3 rather than just keep continually discussing what
4 we need to do in the next 20 years, 30 years, we
5 need to stop business as usual and we need to
6 proceed immediately to pursue what folks have
7 already eloquently described, alternatives to our
8 way of life because we, as humans, have
9 demonstrated that we do have the know-how, the
10 skills, the technology to change the way we are
11 operating on this earth.

12 So hopefully, I can be not so
13 pessimistic in thinking that beginning with you,
14 members of the Commission, can demonstrate a
15 wonderful leadership in turning around our way of
16 doing business and doing it without much more
17 discussion. Because quite frankly, folks,
18 somebody earlier mentioned the eleventh hour. We
19 are past the eleventh hour. And, again, you're
20 the folks who have kids, grandchildren coming
21 along, I am near the end of my line and I hope
22 it's before the lights go off. Thank you very
23 much. And I thank also the people who came and
24 made the presentations before. They were just

1 most impressive and I'm really proud of all of
2 them. And thank you very much for what you folks
3 have on your plate.

4 MR. GILLAM: Thank you. No questions.

5 COMMISSIONER BEATTY: Questions from any
6 party? Questions from Commissioners for Mr. Moore?

7 (No response.)

8 COMMISSIONER BEATTY: Thank you very much,
9 Mr. Moore. We appreciate you coming out.

10 (The witness is excused.)

11 MR. GILLAM: Now, are there any other people
12 that would like to make a statement now?

13 (No response.)

14 COMMISSIONER BEATTY: All right. Well, we
15 thank all of you for appearing this evening. We
16 appreciate how well prepared you were for your
17 statements and how well presented those statements
18 were made.

19 If there's nothing further from any of the
20 parties, we are adjourned.

21 (WHEREUPON, the hearing is adjourned.)

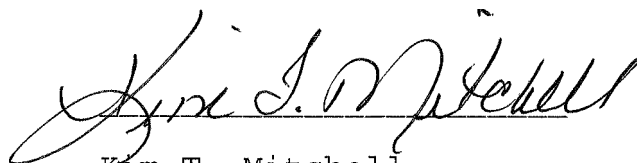
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C E R T I F I C A T E

The undersigned Court Reporter certifies that this is the transcription of notes taken by her during this proceeding and that the same is true, accurate and correct.



Kim T. Mitchell
Court Reporter II