

1 PLACE: Dobbs Building, Raleigh, North Carolina
2 DATE: March 9, 2020
3 DOCKET NO.: E-100, Sub 157
4 TIME IN SESSION: 7:00 p.m. to 7:58 p.m.
5 BEFORE: Commissioner Daniel G. Clodfelter, Presiding
6 Chair Charlotte A. Mitchell
7 Commissioner ToNola T. Brown-Bland
8 Commissioner Lyons Gray
9 Commissioner Kimberly W. Duffley
10 Commissioner Jeffrey A. Hughes
11 Commissioner Floyd B. McKissick, Jr.

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IN THE MATTER OF:
2018 Biennial Integrated Resource Plans
and Related 2018 REPS Compliance Plans

1 A P P E A R A N C E S:
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3 DUKE ENERGY PROGRESS:

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1 P R O C E E D I N G S

2 COMMISSIONER CLODFELTER: Good evening, folks.

3 Let's be in order. I am Commissioner Dan Clodfelter, and

4 I've been assigned to preside over the proceeding this

5 evening. Joining me tonight, and I'll ask them to raise

6 their hands so, again, you can put names with faces --

7 with me tonight are Commission Chair Charlotte Mitchell,

8 Commissioners ToNola Brown-Bland, Lyons Gray, Kim

9 Duffley, Jeff Hughes, and Floyd McKissick.

10 We'll now call for hearing Docket Number E-100,

11 Sub 157, which is in the Matter of the 2019 Integrated

12 Resource Plan Annual Update Report and the Related 2019

13 Renewable Energy Portfolio Standard Compliance Plan.

14 Integrated resource planning is intended to identify --

15 for the utilities to identify those electric resource

16 options that they believe can be obtained at least cost

17 to ratepayers, consistent with safe, adequate, and

18 reliable electric service. The planning process

19 considers conservation, energy efficiency, load

20 management, as well as supply-side alternatives in the

21 selection of resource options.

22 General Statute 62-110.1(c) requires the

23 Commission to develop, publicize, and keep an analysis of

24 the long-range needs for electricity in the state

1 available, and to meet these requirements, the Commission
2 conducts an annual inquiry into the electric utilities'
3 planning processes. In addition, Commission Rule R8-
4 67(b) requires the public utilities to file a Renewable
5 Energy Portfolio Standard Plan, or REPS Compliance Plan,
6 as part of their resource planning reports.

7 In the current cycle, on August 29, 2019,
8 Virginia Electric Power Company, doing business as
9 Dominion Energy North Carolina, filed its 2019 Updated
10 Report and 2019 REPS Compliance Plan.

11 On September 3, Duke Energy Progress and Duke
12 Energy Carolinas filed their 2019 Updated Resource Plans
13 and 2019 REPS Compliance Plans.

14 On January 30th of this year, the Commission
15 issued an Order Scheduling a Public Hearing to be held on
16 this date, at this time, and in this place, for the
17 purpose of taking public testimony with respect to the
18 annual updates and the REPS Compliance Plans. The
19 Commission Order also required the three companies to
20 publish Notice of the Hearing in newspapers having
21 general coverage in their service territories.

22 Pursuant to General Statutes, we recognize the
23 participation of the Public Staff as a party and, in
24 addition, the participation of the North Carolina

1 Attorney General is recognized pursuant to the Notice of
2 Intervention filed by statute.

3 The following are the parties to this hearing
4 who have petitioned to intervene and have been granted
5 status as parties. They include the North Carolina
6 Sustainable Energy Association, the Carolina Industrial
7 Group for Fair Utility Rates, the Environmental Defense
8 Fund, the Carolina Utility Customers Association, the
9 North Carolina Waste Awareness and Reduction Network, the
10 North Carolina Clean Energy Business Alliance, the
11 Southern Alliance for Clean Energy, the Natural Resources
12 Defense Council, the Sierra Club, EcoPlexus, Inc., and
13 Broad River Energy, Inc.

14 At this point in the proceedings I remind all
15 the Commissioners pursuant to the provisions of the State
16 Government Ethics Act of our duty to avoid conflicts of
17 interest, and inquire at this time whether any
18 Commissioner has a known conflict of interest with
19 respect to these proceedings?

20 (No response.)

21 COMMISSIONER CLODFELTER: Madam Court Reporter,
22 let the record reflect that no conflicts were identified
23 by any of the Commissioners.

24 At this point, again, members of the public who

1 may be here tonight, this is not -- we are not here for
2 action on this item. These IRP reports are received by
3 the Commission for information purposes. So I'll call
4 upon the counsel for the parties now to announce their
5 appearances for the record, beginning with the Companies
6 who have filed their plans.

7 MR. SOMERS: Good evening, Commissioners. Bo
8 Somers, General Counsel, on behalf of Duke Energy
9 Carolinas and Duke Energy Progress.

10 COMMISSIONER CLODFELTER: Okay.

11 MR. DANTONIO: Good evening, Commissioners.
12 Nick Dantonio with McGuireWoods on behalf of Dominion
13 Energy.

14 MS. EDMONDSON: Good evening, Commissioners.
15 Lucy Edmondson with the Public Staff on behalf of the
16 Using and Consuming Public. And with me are Layla
17 Cummings and Nadia Luhr.

18 COMMISSIONER CLODFELTER: Okay. I don't see
19 any representation from the Attorney General or any of
20 the other Intervenors. Let me just ask, is there anyone
21 here appearing on behalf of the Attorney General or on
22 behalf of the intervening parties?

23 (No response.)

24 COMMISSIONER CLODFELTER: Okay. Let me ask the

1 parties, are there any preliminary matters we need to
2 address before we take public testimony?

3 MR. SOMERS: (Shakes head negatively.)

4 COMMISSIONER CLODFELTER: All right. Has the
5 Public Staff assembled a list of any persons who wish to
6 provide testimony this evening?

7 MS. EDMONDSON: Yes. We have five people so
8 far that have indicated they'd like to testify.

9 COMMISSIONER CLODFELTER: All right. Folks,
10 let me talk to you about the proceeding (sic) we're going
11 to follow tonight. We sit -- the Commission sits --
12 pursuant to law, we sit as a court. We're not like a
13 city council or a county commission, so our hearings are
14 not conducted in the same way. They're conducted more
15 like proceedings would be in district court or in
16 superior court. That means we sit as judges, and we're
17 here to receive and hear comment. We're not allowed to
18 respond to questions or engage in dialogue, and we will
19 not be rendering any decisions on these matters. These
20 are received for information reporting purposes. But
21 we're also here as part of that process to hear your
22 comments on what the Utilities have filed with us.

23 Because we are sitting as a court, as we're
24 required to do, when you come up to make a statement, I

1 need to have you take an oath, either swear on the Bible
2 or if you prefer not to do so, I'll need you to affirm.
3 If you'll just come up -- when you come up to testify, if
4 you'll just let me know do you want to affirm rather than
5 swear, and I'll give you the proper oath accordingly.

6 When your name is called, we'll take the
7 parties -- the witnesses in the order in which you've
8 signed up to speak. When your name is called, please
9 come up to the chair there in the center where the
10 microphones are here at the desk, and at that point I'll
11 administer the oath of office to you -- not the oath of
12 office -- you want to take this job? Some days we might
13 give you the job. I'll administer to you the oath as a
14 witness.

15 And then after that, if you'll be seated, and I
16 ask you to do the following things before you start your
17 statement. If you'll first give us your name, and
18 because we've got a court reporter here who is
19 transcribing everything, spell your last name for her so
20 she can be sure she gets an accurate spelling of your
21 name. Then give us your address -- if you'll give us
22 your address. And then after that, if you'll tell us in
23 what Company's territory you reside or from whom you take
24 your electric service, so we know whether you're

1 commenting -- going to be commenting on Dominion or on
2 Duke Progress or Duke Carolinas or, for that matter, you
3 may be an indirect customer and buy through a co-op or a
4 municipality. If you'll just let us know so we really
5 know where to place your comments in the appropriate
6 record.

7 We do have a court reporter who is sitting
8 right in front of me here. It's very important that she
9 be able to get down accurately everything that you say,
10 so I need you to speak distinctly and clearly and slowly,
11 keep the microphone pulled as close to you as you can,
12 and that way we'll be sure everybody in the room can hear
13 you accurately.

14 From time to time in these hearings -- I don't
15 -- looking at this group here tonight, I don't think
16 we're going to have any of these folks here. I don't
17 know. Maybe you'll surprise me. But from time to time
18 we have people who come in and want to recite poetry or
19 sing, and if you think about that, that's interesting,
20 but it makes it very hard on the court reporter because
21 it's very hard to transcribe what somebody is saying when
22 they're doing it that way. So let's just keep it
23 straight down the middle tonight, if you will do that for
24 me as a favor, and that'll make it easier for the court

1 reporter.

2 We have a general practice in the Commission of
3 allowing the same exact amount of time to each speaker,
4 and that amount of time that's been established for
5 speakers at public witness hearings is three minutes.
6 We've got a clock up here that will -- you can refer to
7 it, and it will tell you how much time you've got left.
8 Now, if you don't think you can get through everything,
9 this is not your last crack at it. You can file written
10 comments and written testimony with the Commission. If
11 you go to the Commission's website and call up this
12 docket number, it's Docket E-100, Sub 157, there will
13 also be a procedure there that will be explained to you
14 how you can file written statements and written comments
15 that may supplement or add additional material to your
16 comments or things you just ran out of time to say and
17 really wanted to be sure we had. Those will be part of
18 the official record of the proceeding as well.

19 If somebody has already said something that you
20 would have said and you agree with them, one way to save
21 time and have more time to say what you want to say is
22 just say I agree with so and so and then move on to your
23 next topic, and we've got it that way, and then you've
24 got more of your three minutes to use.

1 Those are the basic ground rules and, again, be
2 respectful of the court reporter. Talk to us. This is
3 not -- I mean, the Company is here and the Public Staff
4 is here, but talk to us and let us know what you think.
5 And we're glad you came out tonight. We appreciate you
6 coming.

7 So with that, by way of preliminaries, Ms.
8 Edmondson, if you want to call your first witness.

9 MS. EDMONDSON: Sure. Harry (sic) Richmond.

10 MR. RICHMOND: And it's Harvey.

11 MS. EDMONDSON: So sorry.

12 MR. RICHMOND: H-A-R-V-E-Y.

13 MS. EDMONDSON: I am -- have bad eyes.

14 MR. RICHMOND: And I'll affirm.

15 COMMISSIONER CLODFELTER: Okay.

16 HARVEY RICHMOND; Having first been duly sworn,

17 Testified as follows:

18 STATEMENT BY MR. RICHMOND:

19 My name is Harvey Richmond, and I reside --

20 COMMISSIONER CLODFELTER: Let's start off --

21 hold on. Pull it a little closer, and is the green light
22 on?

23 THE WITNESS: Yes.

24 COMMISSIONER CLODFELTER: Great. Then you're

1 good to go.

2 THE WITNESS: Okay. My name is Harvey
3 Richmond. I reside at 200 Ivygreen Chase Court in Apex,
4 and the last name is R-I-C-H-M-O-N-D. I'm a retired
5 environmental analyst who worked on national air quality
6 standards for over 30 years with the U.S. EPA here in
7 North Carolina.

8 I'm here to urge the Commission to send Duke
9 Energy's IRP back to the drawing boards. Duke Energy's
10 target for the amount of renewable energy that would be
11 available 15 years from now is woefully inadequate.

12 More than a decade ago, Duke Energy placed
13 solar panels on the EPA and IEHS Childcare Center in RTP,
14 then a few years later it placed solar panels on one of
15 the wings of EPA's research center on the campus where I
16 work. If one watches TV or listens to radio, one sees
17 and hears numerous ads where Duke makes it look like
18 they're fully invested in solar and renewable energy. In
19 reality, Duke has slowed down the installation of new
20 solar in this state and has lobbied for measures that
21 impede the installation of solar and wind energy.

22 North Carolina used to be a leader in the
23 Southeast for developing renewable energy through the
24 REPS provisions. Now the state has dropped nine spots

1 and is number 30 in a scoring of how states are doing on
2 renewable energy. Our neighbors to the north, Virginia,
3 and south, South Carolina, are racing ahead to promote
4 solar energy and battery storage.

5 In the meantime, Duke's plan is to build a lot
6 of new gas-fired power plants over the next 15 years.
7 This would lock in higher emissions of methane, a
8 greenhouse gas that is over 80 times more potent than
9 carbon dioxide, in impacting our climate. If we are to
10 have any hope of meeting the Paris climate goals and
11 North Carolina's climate goals under Executive Order 80,
12 the Commission needs to stop any new gas-fired plants.

13 Contrary to the propaganda put forward by Duke
14 Energy and others, fracked gas is not a bridge fuel.
15 Instead of replacing coal-fired power plants with gas-
16 fired ones, Duke Energy and Dominion need to aggressively
17 support the installation of solar energy combined with
18 battery storage. Duke should be putting solar energy on
19 school rooftops, on big box stores like Walmart and
20 Target, on churches and municipal buildings.

21 Solar energy combined with battery storage is
22 both less expensive and safer than the alternatives.
23 There is no such thing as a solar spill or solar energy
24 explosion. Solar with battery storage doesn't threaten

1 the water quality and livelihoods of residents, in
2 contrast to the Atlantic Coast and Mountain Valley
3 Pipelines which threaten vulnerable populations and the
4 environment.

5 In conclusion, I urge the Utilities Commission
6 to do what is best for the public, and insist that Duke
7 and Dominion significantly revise their IRPs to meet the
8 needs of its customers and ensure that it does its part
9 in addressing climate change.

10 COMMISSIONER CLODFELTER: Thank you, Mr.
11 Richmond. I forgot to tell folks that you may get a
12 question or two from the lawyers who are here or from the
13 Commissioners who may want to ask you something, so when
14 you get done with your statement, hang around for just a
15 second or two and let me see if there are any questions
16 that people want to you ask you, okay?

17 THE WITNESS: Yeah. And I have a copy of this.

18 COMMISSIONER CLODFELTER: Do you want to
19 introduce it as an exhibit?

20 THE WITNESS: Yes.

21 COMMISSIONER CLODFELTER: We will receive it if
22 you do.

23 THE WITNESS: Yes.

24 COMMISSIONER CLODFELTER: Okay. Great. We'll

1 mark that as Richmond Exhibit Number 1. And unless
2 there's some objection from the parties, we will receive
3 exhibits offered by the public witnesses into the record
4 as they are marked, if that's agreeable. All right.
5 Thank you.

6 CHAIR MITCHELL: Commissioner Clodfelter, I do
7 have a question.

8 MS. EDMONDSON: You wanted that marked as?

9 COMMISSIONER CLODFELTER: Richmond Exhibit 1.

10 MS. EDMONDSON: All right.

11 (Whereupon, Richmond Exhibit 1 was
12 marked for identification and
13 received into evidence.)

14 COMMISSIONER CLODFELTER: And Mr. Richmond,
15 Commissioner Mitchell has a question for you.

16 EXAMINATION BY CHAIR MITCHELL:

17 Q Mr. Richmond, the -- you referenced rankings
18 for -- I think it was for solar installations?

19 A Renewable energy. I can provide that in
20 written comments. I'll follow up.

21 Q Can you -- do you know -- do you recall
22 which --

23 A I just saw it today from a member who is in the
24 audience, a fellow member, so let me submit that for the

1 record.

2 Q Okay.

3 CHAIR MITCHELL: Thank you.

4 COMMISSIONER CLODFELTER: Thank you. Any other
5 questions?

6 MR. SOMERS: I do --

7 COMMISSIONER CLODFELTER: Mr. Somers.

8 MR. SOMERS: -- if you don't mind, Mr.

9 Richmond.

10 EXAMINATION BY MR. SOMERS:

11 Q My name is Bo Somers. I'm the attorney for
12 Duke Energy Carolinas and Duke Energy Progress. Are you
13 aware that since filing the 2019 IRPs, that Duke Energy
14 has stated a goal of reducing carbon emissions by at
15 least 50 percent by 2030 and getting to net zero
16 emissions of carbon by 2050?

17 A Yes. I'm aware of that. What I haven't seen
18 is how that's consistent with the gas-fired power plants
19 that Duke has proposed, which will lead to methane
20 emissions which will blow our greenhouse gas goals.

21 Q And I believe you testified that the amount of
22 solar in the 2019 IRPs was inadequate, in your opinion.

23 A Right.

24 Q What amount of solar do you believe would be

1 appropriate?

2 A I would say more in the 30 to 40 percent.

3 MR. SOMERS: Thank you.

4 MS. EDMONDSON: I have two questions.

5 COMMISSIONER CLODFELTER: Hold on, hold on.

6 Ms. Edmondson has questions for you.

7 MS. EDMONDSON: Yes.

8 EXAMINATION BY MS. EDMONDSON:

9 Q Mr. Richmond, one question they had wanted you
10 to answer was who your electric provider is.

11 A Oh, yes. Apex.

12 Q Town of -- the municipality?

13 A Town of Apex, which gets its wholesale energy
14 from Duke, right.

15 Q And then one other question I had, you talked
16 to -- about North Carolina falling to number 30?

17 A Yeah. The score --

18 Q What is that? What -- whose scoring?

19 A Yeah. It's a scoring, and I just saw it today,
20 you know, but I don't have it at my fingertips. I'd like
21 to provide that --

22 Q Sure.

23 A -- for the record.

24 Q Okay.

1 MS. EDMONDSON: Thank you.

2 COMMISSIONER CLODFELTER: Thank you. I think
3 this time you get to -- get to go.

4 THE WITNESS: Thanks.

5 (Witness excused.)

6 MS. EDMONDSON: All right. The next witness is
7 Joe Adamsky.

8 MR. ADAMSKY: Joe Adamsky. I will attest.

9 JOE ADAMSKY; Having first been duly affirmed,
10 Testified as follows:

11 STATEMENT BY MR. ADAMSKY:

12 So my name is Joe Adamsky. Sorry. Technical
13 difficulty.

14 COMMISSIONER CLODFELTER: All right. That
15 doesn't count off your time.

16 THE WITNESS: So Adamsky is A-D-A-M-S-K-Y. I
17 live at 1404 Goren Place in Raleigh, North Carolina,
18 27603. I'm a Duke Progress ratepayer.

19 COMMISSIONER CLODFELTER: You were here with us
20 about two weeks ago, weren't you?

21 THE WITNESS: Yes.

22 COMMISSIONER CLODFELTER: I think so.

23 THE WITNESS: And I almost was sworn into
24 office then.

1 COMMISSIONER CLODFELTER: Please -- you see how
2 anxious we are to get -- please proceed with your
3 statement.

4 THE WITNESS: All right. Thank you. Thanks
5 for inviting us in and hearing our comments today.

6 Climate science clearly makes the urgent case
7 for renewable clean energy to be everyone's correct
8 choice for all future power generation projects. Also,
9 the competitive cost of renewable clean power generation
10 storage compared to natural gas generation has removed
11 the cost element as a driver in the decision.

12 In addition, more and more North Carolina
13 residents and ratepayers are demanding renewable and
14 clean energy generation at a hundred percent in the near
15 future, with clean energy -- excuse me -- with clean
16 energy resolutions being passed in an ever increasing
17 number of municipalities. We will take it, too, to make
18 sure to enter as evidence all the different resolutions
19 we have available to us, so we'll be putting that
20 forward.

21 COMMISSIONER CLODFELTER: Do you have those
22 this evening? I'm not going to count this against your
23 time. Do you have those this evening or --

24 THE WITNESS: No.

1 COMMISSIONER CLODFELTER: All right.

2 THE WITNESS: But I'll submit them online.

3 COMMISSIONER CLODFELTER: I'll ask what you do
4 is coordinate with one of these folks here with the
5 Public Staff to help you mechanically just be sure we get
6 them all, okay?

7 THE WITNESS: Very good. Thank you.

8 COMMISSIONER CLODFELTER: Please proceed.

9 THE WITNESS: So I hope that North Carolina
10 Utility Commission will join Virginia and California in
11 saying no to bad energy plans and be the heroes of our
12 history. If Duke gets a clear no now, they can stop
13 throwing good money after bad on national -- natural gas
14 pipelines and power generation. Please don't wait and
15 cause more damage to our planet and our future. Say no
16 now. I ask you to say no new fossil fuel projects now or
17 ever. Thank you.

18 COMMISSIONER CLODFELTER: Thank you. Any
19 questions for Mr. Adamsky?

20 MR. SOMERS: I do.

21 COMMISSIONER CLODFELTER: Mr. Somers.

22 EXAMINATION BY MR. SOMERS:

23 Q Mr. Adamsky, I believe you were here last week
24 for the rate case public hearing, and did you speak on

1 behalf of the AARP or --

2 A No. Just an individual.

3 Q But you expressed concerns about the amount of
4 the rate increase that Duke Energy Carolinas was asking
5 for; is that correct?

6 A Yes, I did.

7 Q And I believe you testified that many customers
8 want a hundred percent renewable energy. Is that what
9 you would ask Duke to submit in its next IRP as well?

10 A Absolutely.

11 Q And would you be concerned about what the cost
12 of a hundred percent renewable energy plan might be?

13 A From what I've read and seen, renewable energy
14 plus storage is cost competitive or even possibly an
15 advantage over other sources. So from what I've heard, I
16 have no reason to be concerned with that fact.

17 Q Can you elaborate on what your basis is for
18 testifying that renewables and storage would be more cost
19 effective than a resource plan that included natural gas?

20 A I could follow up with some specific details
21 and articles on it. One of the primary parts is the
22 energy analyst that works for NC WARN has given a very
23 thorough, detailed plan on solar and storage and the cost
24 competitive nature. Also, there's articles and

1 information all over the country about it, but I can -- I
2 could submit some specifics ones after for the record.

3 Q Thank you very much.

4 COMMISSIONER CLODFELTER: Anything else?

5 (No response.)

6 COMMISSIONER CLODFELTER: Thank you for coming.

7 THE WITNESS: I'll stay after.

8 MS. EDMONDSON: Yeah. We will get the contact
9 information.

10 THE WITNESS: Thank you.

11 COMMISSIONER CLODFELTER: Okay.

12 (Witness excused.)

13 MS. EDMONDSON: Next witness Dale Evarts.

14 DALE EVARTS; Having first been duly affirmed,
15 Testified as follows:

16 STATEMENT BY MR. EVARTS:

17 My name is Dale Evarts, E-V-A-R-T-S. I'm a
18 Duke Energy Carolinas customer, and I live at 2205
19 Pershing Street in Durham.

20 So first, thank you for your service in this
21 important role of managing the energy system for North
22 Carolina.

23 Until recently, I led the Climate and
24 International Group at the Environmental Protection

1 Agency in the Research Triangle Park. I'm also
2 testifying on behalf of a colleague, Dr. Drew Shindell,
3 Duke University's climate scientist and lead author in
4 the IPCC, the largest -- the world's leading climate
5 science organization.

6 In a letter this past fall to Governor Cooper,
7 Dr. Shindell and I, along with 25 former EPA experts,
8 proposed a moratorium on new natural gas infrastructure,
9 including power plants, pipelines, and pump stations.
10 Why? Because it would help him achieve the goals of the
11 North Carolina Clean Energy Plan by creating a healthier,
12 safer, equitable, and resilient energy system for our
13 state and saving money for North Carolina's ratepayers.

14 I will speak to the health and climate issues,
15 and another one of my coauthors for this letter, Kathy
16 Kaufman, will speak to savings.

17 Methane is a key constituent of natural gas and
18 a hundred times more effective than carbon dioxide in
19 trapping heat. It is the largest contributor to the
20 current failure to keep the world on an emissions path
21 that achieves the global target of 2 degrees centigrade
22 warming which we already know is probably too warm.

23 Recent research shows that the U.S. fracking
24 boom is likely an important contributor to the recent

1 surge in atmospheric methane. Methane gas is also a
2 precursor to ozone, a potent air pollutant that harms
3 human health. Analysis by Dr. Shindell and his
4 colleagues indicates that methane emitted globally each
5 year due to human activities leads to about 10,000
6 premature deaths in the U.S. and several hundred in our
7 state.

8 Accounting for the health and environmental
9 cost, methane has about 50 times the impact of carbon
10 dioxide. People most affected by methane gas are North
11 Carolinians who are contributing the least to the climate
12 and air quality problems, low-income communities and
13 communities of color. Halting the expansion of methane
14 gas infrastructure helps to meet the equity and just
15 transition principles embodied in our Clean Energy Plan.
16 Advances in wind and solar, paired with battery storage,
17 as previous speakers have spoken to, are giving us a
18 healthier, faster, and cheaper way to get a more
19 resilient energy system.

20 I certainly respect the engineers and experts
21 at Duke Energy who I have worked together with during the
22 Clean Energy Plan stakeholder processes. Duke Energy is
23 full of very good people, and we definitely need them and
24 their expertise as partners as we go forward in creating

1 this new energy future.

2 But the Duke IRP, as it stands now, doesn't
3 reflect a partnership. It prioritizes reliance on
4 dangerous and costly methane gas. Please look closely at
5 what they are proposing to do and require Duke Energy to
6 be a partner rather than an obstacle in creating the
7 carbon free energy future for our state envisioned in our
8 Clean Energy Plan. Thank you.

9 COMMISSIONER CLODFELTER: Thank you. Let's see
10 if we have questions for you. Anyone? Mr. Somers.

11 MR. SOMERS: I have one.

12 EXAMINATION BY MR. SOMERS:

13 Q Good evening.

14 A Good evening.

15 Q I believe you heard my question to Mr.
16 Richmond, and since you've been working on the Clean
17 Energy Plan, I believe you've heard of Duke's goal of
18 being net zero carbon emissions by 2050?

19 A Very, very commendable.

20 Q Thank you. I'm interested -- obviously, you
21 have some experience in this area. If you were Duke
22 Energy and you were trying to meet that goal of being net
23 zero carbon emissions by 2050, how would you construct
24 your IRP?

1 A Well, I'd go beyond that, actually, the IRP.
2 I'd look at how -- for one, how other utilities around
3 the country are doing and seem to be able to make more
4 ambitious targets than the IRP currently has in terms of
5 increasing the amount of renewable energy and now storage
6 available to customers. And I would set a very bold goal
7 of being carbon -- you know, not only being -- not only
8 being net carbon by 2050, but being carbon free by 2050.
9 The science tells us we have to be out of greenhouse gas
10 emitting sources at least by then, if not before.
11 Because the U.S. has more capabilities to do that than a
12 lot of the developing countries, we're expected to do it
13 sooner.

14 So it's going to take some bold -- I think
15 setting -- as a company, setting very bold -- a very bold
16 goal, and then trying to model towards that goal and
17 backing, you know, for what has to happen in the
18 intervening years as a strategy. The details I
19 definitely will leave to your expert engineers and so on,
20 but working with other engineers outside the company that
21 have these ideas as well. Thank you.

22 Q Thank you, Mr. Evarts.

23 COMMISSIONER CLODFELTER: Commissioner Brown-
24 Bland.

1 COMMISSIONER BROWN-BLAND: Yes.

2 EXAMINATION BY COMMISSIONER BROWN-BLAND:

3 Q Mr. Evarts, are you familiar with or know
4 anything about renewable natural gas?

5 A You mean coming from landfills and -- yeah --

6 Q Perhaps bio sources?

7 A What sources?

8 Q Bio sources.

9 A Yes. Bio sources. Right.

10 Q Are you -- do you have any thoughts about the
11 use of gas from those sources?

12 A I don't have a lot of thoughts about it. I'd
13 say it's -- it would be excellent to -- I mean, our -- my
14 office of EPA regulated landfill gas increasingly was
15 looking at how they could capture that methane from that
16 as a resource that could be used for powering, for
17 instance, the trucks that come and dump the waste there
18 and so on. So I see it as a potential for energy in the
19 future.

20 Q And separate from renewable, this is a more
21 general question, but you almost hit right on what I was
22 going to ask you about. Are you aware of research and
23 development efforts to eliminate methane emissions or to
24 drastically reduce them from the levels we currently have

1 documented?

2 A Yes. Yes, I am.

3 Q If you assume just hypothetically that those
4 efforts are successful and we have little to none or
5 we're able to capture that methane and make good use, not
6 have it to be emissions, would you still want the Duke
7 system or the Dominion system or any other electric
8 system not to use natural gas?

9 A I think at this point the way it is mined,
10 transported, processed, and used, we only count right now
11 in North Carolina the emissions of CO2 coming out of the
12 gas plants, and it is definitely cleaner than coal in
13 that respect. But if you count in any leakage from the
14 mining or the transport, pumping, you know, processing
15 before it gets to that plant, if you have a leakage rate
16 of between 1 and 3 percent or 4 percent, it actually can
17 be dirtier overall in terms of emissions to the
18 atmosphere and its effect on climate than a coal-fired
19 power plant.

20 Q So, and that's --

21 A So I -- to answer your question, I think you're
22 going to have to deal with leakage and the fracking and
23 the problems with leakage around fracking, as well as all
24 the other environmental problems that a lot of people

1 have, I'm sure, talked about here at different times.

2 Q And so hypothetically if it's at 1 percent
3 emissions, you see it still potentially dirtier than
4 coal?

5 A Well, in the end, the CO2 emissions, even if
6 you were able to capture all the methane in the process
7 to it, the CO2 emissions in the end are going to have to
8 stop, so the gas or gas-fired power plants are going to
9 have to be phased out between now and 2050, according to
10 the best science we have right now. So we have to -- we
11 have to get to zero emissions of fossil fuels, the
12 emissions from fossil fuels by then.

13 Q So if it was down to a half a percent, that's
14 not sufficient. We still need to be at zero --

15 A Yes.

16 Q -- with the natural gas --

17 A Well, especially given what --

18 Q -- and methane.

19 A Yes, yes.

20 Q Okay.

21 COMMISSIONER BROWN-BLAND: Thank you.

22 THE WITNESS: Thank you.

23 COMMISSIONER CLODFELTER: Anyone else?

24 Commissioner Duffley.

1 THE WITNESS: Ah. Sorry.

2 EXAMINATION BY COMMISSIONER DUFFLEY:

3 Q Good evening.

4 A Good evening.

5 Q So you mentioned in your testimony that you
6 wanted North Carolina to follow other states that you
7 said were doing a better job at increasing renewables --

8 A Uh-huh.

9 Q -- and the use of renewables. What are those
10 states that you were referring to?

11 A Californ--- the ones I'm most aware of are
12 California, Massachusetts, New York, and Colorado, and
13 increasingly Nevada. I think there's -- and I know
14 specific -- I don't know specific utilities. I can
15 actually provide that afterwards, with a list of the
16 utilities that I think are taking, as I was saying, to
17 the representative from Duke Energy taking, I think,
18 bolder steps than Duke is able to right now.

19 COMMISSIONER DUFFLEY: Okay. Thank you.

20 THE WITNESS: Sure.

21 COMMISSIONER CLODFELTER: Last call.

22 (No response.)

23 COMMISSIONER CLODFELTER: Thank you, Mr.
24 Evarts. Appreciate it.

1 (Witness excused.)

2 MS. EDMONDSON: Kathy Kaufman. So this will be
3 Evarts Exhibit 1.

4 COMMISSIONER CLODFELTER: We'll mark that as
5 Evert's Exhibit 1, and without objection, we will admit
6 it as thus marked. Great.

7 (Whereupon, Evarts Exhibit 1 was
8 marked for identification and
9 admitted into evidence.)

10 KATHY KAUFMAN; Having first been duly affirmed,
11 Testified as follows:

12 STATEMENT BY MS. KAUFMAN:

13 My name -- do I need to give my address first
14 or --

15 COMMISSIONER CLODFELTER: Whichever you want to
16 start with. As long you get it all covered, you're fine.

17 THE WITNESS: It doesn't count against the
18 three minutes.

19 COMMISSIONER CLODFELTER: Oh, your three
20 minutes doesn't start until you start your statement.

21 THE WITNESS: Okay. Okay. So my name is Kathy
22 Kaufman. I live at 1305 Lucy Lane in Chapel Hill, and
23 I'm a Duke Carolinas customer.

24 COMMISSIONER CLODFELTER: Okay. Let's spell

1 your last name for the court reporter, please.

2 THE WITNESS: Kaufman. It's K-A-U-, F as in
3 Frank, -M-A-N, one F, one N.

4 COMMISSIONER CLODFELTER: Right. Got it.
5 Great. Okay. Please proceed.

6 THE WITNESS: Hi. My name is Kathy Kaufman.
7 In late 2017 I retired from the U.S. Environmental
8 Protection Agency in Research Triangle Park after 29
9 years as an air quality policy and economics analyst.

10 Recent analysis by the Rocky Mountain Institute
11 indicates that due to the rapid decline in the cost of
12 renewables, the cost of clean energy generation is likely
13 to be lower than the cost of new gas plants for 90
14 percent of the proposed construction in the U.S. by the
15 date the plants are expected to begin operating. Also,
16 90 percent of proposed new gas-fired power plants are
17 likely to be uncompetitive by 2035, becoming stranded
18 assets at the expense of ratepayers.

19 These economic trends should give us all pause
20 about Duke's plans for massive new baseload natural gas
21 in North Carolina, and just to consider, in turn, solar,
22 wind, and battery storage. For example, with solar,
23 recently, with the levelized cost of natural gas now
24 running around four to four and a half cents per kWh, in

1 2019 the City of Los Angeles signed a Solar Power
2 Purchase Agreement at 2 cents per kWh for a facility that
3 will also include battery storage at 1.3 cents a kWh.
4 This is indicative of trends around the country and even
5 in different parts of the world.

6 Wind energy. According to the Department of --
7 the U.S. Department of Energy, wind is often cheaper than
8 fossil fuel -- or wind is cheaper than fossil fuel around
9 the country. They say that by reducing national
10 vulnerability to price spikes and supply disruptions with
11 long-term pricing, wind is anticipated to save consumers
12 \$280 billion by 2050. That's according to the DOE, and I
13 have that reference here. Right now, North Carolina
14 ratepayers are not benefiting from any of those savings.

15 And a little bit about energy storage.
16 According to the respected journal Science, in an article
17 titled "Giant Batteries and Cheap Solar Power are Shoving
18 Fossil Fuels Off the Grid," a 2019 analysis of "more than
19 7,000 global storage projects by Bloomberg New Energy
20 Finance reported that the cost of utility-scale lithium-
21 ion batteries had fallen by 76 percent since 2012, by 35
22 percent in the last 18 months. Another market watch
23 firm, Navigant, predicts of further halving by 2030," and
24 that's referenced as well.

1 Storage can obviate the need for expensive
2 transmission line buildout, making adoption of solar and
3 wind resources even more of a no-brainer. Critically for
4 North Carolina the availability of stored energy also would
5 enable greater resilience in the face of more frequent
6 storms, hurricanes, and floods that we will continue to
7 face.

8 Jobs. In North Carolina alone, in 2018 there
9 were over 43,000 clean energy sector jobs, two-thirds of
10 which are jobs in energy efficiency and solar energy.
11 This is far more than employed by fossil fuel electric
12 generation, even though the majority of our energy in
13 North Carolina comes from fossil fuels. Imagine the
14 employment boom that we would generate by unleashing
15 renewable energy and energy efficiency in our state.

16 So the bottom line, including the full -- in
17 addition, including the full societal damages of climate
18 change and air pollution, like my colleague Dale alluded
19 to, caused by using methane gas to generate power reveals
20 its true much higher cost. The Governor's Clean Energy
21 Plan calls on regulators and utilities to incorporate
22 some of these costs in their analyses of the relative
23 cost of different energy resources. Knowing the true
24 cost can help you, the Utilities Commission, hold

1 regulated power providers to lower cost sources such as
2 wind, solar, storage, and efficiency. Thank you.

3 COMMISSIONER CLODFELTER: Thank you. Let's see
4 if anyone has questions for Ms. Kaufman.

5 THE WITNESS: If I may, I'd like to address the
6 question that was asked of several other people by --

7 COMMISSIONER CLODFELTER: Well, you know,
8 witnesses generally don't get to do that. They have to
9 answer questions, so --

10 MS. BUCKLEY: Go ahead. Ask her.

11 MR. SOMERS: I have a question.

12 (Laughter.)

13 COMMISSIONER CLODFELTER: Mr. Somers -- Mr.
14 Somers, you're recognized.

15 EXAMINATION BY MR. SOMERS:

16 Q Ms. Kaufman, would you like to answer a
17 question I asked someone else?

18 A Yes, I would.

19 Q Please go ahead.

20 A Okay. So you had asked about 50 percent by
21 2030 and how -- and you had asked what we thought about
22 Duke's goal of 50 percent by 2030, and I just want to
23 make a couple of points about that. And Dale alluded to
24 this a little bit.

1 That goal does not include methane from
2 fracking and the transportation through pipelines of gas.
3 It doesn't include the leaking from fracking, all the
4 methane leakage from fracking, and it doesn't include the
5 methane leakage from the pipelines coming from other
6 states and into North Carolina. And when you include
7 that, as Dale said, the gas can be -- with leak rates up
8 to 4 percent or greater, gas can be worse than coal for
9 the climate. So I just wanted to reiterate that.

10 I also wanted to point out that Duke is
11 currently meeting its REPS requirement largely or in
12 fairly large part by buying renewable energy credits from
13 out of state, so these benefits are not coming into North
14 Carolina. And if we want more renewable energy in North
15 Carolina, then we ought to require Duke to actually build
16 the renewable energy in North Carolina.

17 Q And you're aware that North Carolina is number
18 two in the country for installed solar?

19 A And falling fast.

20 Q Falling behind who?

21 A Falling behind -- behind other states who are
22 moving faster now that Duke is close to achieving the
23 REPS from 2006 or '07. I can't remember the year. Other
24 states are now moving ahead faster than we are.

1 Q If I can --

2 A Including South Carolina and Virginia. That's
3 all I have.

4 Q Can I ask you another question?

5 A Sure.

6 Q Are you done?

7 A Yeah. I'm done.

8 Q Okay. So I asked the question of your former
9 colleague -- first, I'd like to say all these bright
10 people retiring from EPA, I hope there are still some
11 good folks working there.

12 A There are.

13 Q Okay. I asked the question to your colleague
14 about Duke's goal of by 2050 being net zero carbon
15 emissions. How would you meet that goal if you were
16 designing the plan for Duke Energy?

17 A I would do similarly the way Dale answered the
18 question. I would look to states around the country that
19 are incorporating much more solar and storage, and as the
20 Utilities Commission I would look at the way Duke's
21 business model is and see if that is really providing
22 least cost; now, with our different energy landscape, is
23 that really providing least cost energy to North Carolina
24 ratepayers. I don't believe it is with the falling --

1 precipitously falling cost of solar and now storage, for
2 example. We haven't even looked into offshore wind,
3 which is another huge opportunity for North Carolina in
4 terms of jobs and emissions. There's an awful lot that
5 we can do.

6 And Duke doesn't do a whole lot of energy
7 efficiency work, either. There isn't a lot of demand
8 response going on in the state. There could be a lot
9 more. And as a Duke Carolinas customer, I can see that
10 the programs that exist are not nearly as good as some
11 programs in other states.

12 Q But you're aware that Duke Energy is number one
13 in the Southeast for energy efficiency and DSM, right?

14 A Yeah. I'm also aware that the Southeast is not
15 anywhere close to number one in the country in any of
16 that. We're lagging behind the rest of the country, and
17 South Carolina and Virginia just starting to put in place
18 rules that will allow them to catch up.

19 MR. SOMERS: Thank you.

20 THE WITNESS: Yeah.

21 COMMISSIONER CLODFELTER: Anything else for Ms.
22 Kaufman?

23 (No response.)

24 COMMISSIONER CLODFELTER: Thank you for coming.

1 Appreciate it. Do you want to introduce that as an
2 exhibit?

3 THE WITNESS: Yes, I would.

4 COMMISSIONER CLODFELTER: Great. We'll mark it
5 as Kaufman Exhibit Number 1 and, without objection, it
6 will be admitted as marked.

7 (Whereupon, Kaufman Exhibit 1 was
8 marked for identification and
9 admitted into evidence.)

10 MS. EDMONDSON: And the next witness is Anne --

11 MS. LAZARIDES: Lazarides.

12 MS. EDMONDSON: Thank you.

13 MS. LAZARIDES: My name is Anne Lazarides,
14 L-A-Z-A-R-I-D-E-S. I live at --

15 COMMISSIONER CLODFELTER: Let's get you sworn
16 first.

17 MS. LAZARIDES: Oh, I'm sorry.

18 ANNE LAZARIDES; Having first been duly sworn,
19 Testified as follows:

20 COMMISSIONER CLODFELTER: All right. Now your
21 name, address, and so forth.

22 THE WITNESS: Anne Lazarides.

23 COMMISSIONER CLODFELTER: Got it.

24 THE WITNESS: My address is 2319 West Club

1 Boulevard. I'm a --

2 COMMISSIONER CLODFELTER: In what city?

3 THE WITNESS: Durham.

4 COMMISSIONER CLODFELTER: Durham.

5 THE WITNESS: I'm a customer of DEC.

6 STATEMENT BY MS. LAZARIDES:

7 I have extensive professional experience in
8 developing models of physical systems, including
9 stochastic systems, i.e., systems with uncertainties and
10 dynamics, and in both industrial, academic, and
11 consulting energy settings.

12 I agree with Dale that we should acknowledge
13 those of you who are willing to take on this job at an
14 extremely difficult time. I think the transition we're
15 going through is really challenging, and it's an amazing
16 challenge to the people who are responsible for pulling
17 it off.

18 I have concerns about the IRP that are very
19 close to the ones discussed by my -- the people I know
20 from my community who are EPA people you've already heard
21 from, so I'll just briefly skip over that, beyond saying
22 that I'm concerned about the new generation buildout
23 being more than 50 percent gas, and at a time when we
24 have a whole pallet of new resources in the distributed

1 generation category and in demand response that are not
2 fully exploited.

3 So the Utility identifies load growth as being
4 a little bit over 1 percent for commercial and
5 residential sectors, less than that for industry, and
6 proposes to meet needs with the majority component being
7 gas plants, CCs and CTs. Their rationale for gas is that
8 gas combustion provides the flexibility needed to meet
9 variable load and will continue to be needed to
10 compliment the intermittent nature of renewable supply.

11 So we do -- are in a situation where DEC's
12 generation comes 55 percent from nuclear plants that run
13 nonstop, as opposed to in a load following nature as they
14 are run in France, which makes them inflexible. And we
15 have been reminded by the recent Duke NREL study that if
16 you just pile solar on top of a nuclear baseload, you end
17 up without the flexibility you need and you end up
18 curtailing the renewables. So there's a different
19 solution, but we've been reminded of the problem of solar
20 plus nuclear.

21 The reason we are seeing renewables presented
22 as solutions throughout the country is that there are
23 cost effective methods of balancing supply and demand
24 through solutions that include renewables, but also

1 operational changes, storage, and demand response.

2 How do we do the planning, however, when we
3 have to -- if we want to consider distributed generation,
4 energy efficiency, and demand response on an equal
5 fitting -- footing with the power plants whose properties
6 are well understood and included in the models that we
7 have been using for planning today?

8 There are new tools for coming up with economic
9 solutions that include these other resources, but they
10 haven't reached a steady state and they are subject to
11 debate.

12 The other problem we have is the Utility is
13 responsive to two masters with misaligned goals. You all
14 know all about this. But it's pretty clear that the
15 Utility gets relentless, compelling input from the master
16 that is looking for earnings growth.

17 We need to acknowledge that finding the least
18 cost solution is actually impossible at this time, and so
19 what we need to do instead is steer the results towards
20 as low cost solutions as we can because it's impossible
21 to take into account all of the possibilities with the
22 level of precision that we were able to look at central
23 plans in the past. And that situation will improve, but
24 we need to make short-term plans that head in a low cost,

1 clean direction and not be steered off by legacy planning
2 processes that haven't yet been updated.

3 So, specifically, I request that the Commission
4 issue an order that requires the Utilities to submit
5 plans that include a case that excludes new gas plants.
6 This is consistent with what's been done in the past with
7 an order being issued for cases that do and don't include
8 a carbon price. And under the circumstances, it may well
9 be that in the near future we will have legislated or
10 found some other means to rule out gas plants.

11 We also need to close the loopholes that allow
12 the Utility to increase gas use through dual fuel
13 conversions executed without regulatory approval. We
14 need to remove barriers to coupling storage with existing
15 solar farms and farms in the interconnection queue. We
16 need to step outside the debate of what load growth
17 actually is by issuing an order that requires the Utility
18 to present a plan that meets load growth with energy
19 efficiency.

20 At this current time, energy efficiency is
21 being incremented elsewhere at rates of 2 to 3 percent
22 per year in places where people are serious about taking
23 advantage of the true low hanging fruit of the energy
24 supply problem. And that could well -- and being only

1 half that aggressive could easily cover the 1 percent
2 load growth that's projected by the Utility and would
3 remove us from having to debate whether that 1 percent is
4 correct.

5 We could do -- we could also do a detailed
6 characterization of the territory's potential to meet
7 significant amounts of peak capacity through demand
8 response. The Utility is currently collaborating with
9 NREL on some modeling efforts, and could very well
10 collaborate with NREL and Lawrence Berkeley National Lab
11 to translate extensive studies already done by them of
12 demand response potential from specific sectors,
13 including process specific components of industrial
14 plants into location specific demand response potential
15 supply curves for this state. That would enable us to
16 proceed with including the incredible low cost resource
17 of demand response in our planning process on par with
18 other things that are included in planning now, such as
19 evaluation of central power plants. Thank you.

20 COMMISSIONER CLODFELTER: Ms. Lazarides, you
21 had an awful lot of very dense material in there. Do you
22 have that in writing to where we could receive it as an
23 exhibit?

24 THE WITNESS: Yes. So instead of making it

1 pretty, I went and read the IRP today --

2 COMMISSIONER CLODFELTER: Ah.

3 THE WITNESS: -- so I think I'll submit it
4 online rather than give you my handwritten version.

5 COMMISSIONER CLODFELTER: Well, my note taking
6 was not as good as the court--- that's why she's the
7 court reporter and I'm not.

8 THE WITNESS: I mean, I'm happy to give this to
9 you, but I'd like to make it as readable as possible.

10 COMMISSIONER CLODFELTER: If you could do that,
11 because there were quite a number of suggestions in there
12 that it was difficult for me to capture notetaking --

13 THE WITNESS: Okay.

14 COMMISSIONER CLODFELTER: -- and that's great.
15 Let's see if there are any questions for you. Anyone?

16 CHAIR MITCHELL: I do have a question --

17 COMMISSIONER CLODFELTER: Go ahead, Chair
18 Mitchell.

19 CHAIR MITCHELL: -- Commissioner Clodfelter.

20 EXAMINATION BY CHAIR MITCHELL:

21 Q Ms. Lazarides, can you repeat the point that
22 you made about the least cost paradigm? I think I heard
23 you say that were we to -- were we to move in one
24 direction, we might be sort of moving away from a least

1 cost approach. Can you go back to that point in your
2 remarks and just --

3 A I'm concerned that --

4 Q -- repeat what you said?

5 A -- until the planning tools become --

6 COMMISSIONER CLODFELTER: You need to get your
7 microphone just a little -- there you go.

8 A -- until the planning tools become better able
9 to incorporate demand response and distributed generation
10 on an equal footing with central power stations, we won't
11 be getting cost minimization from, you know, the
12 production cost models. And so there's going to be a
13 delay before those models give us what we want, and
14 there's urgency about proceeding with the transition for
15 environmental as well as economic reasons.

16 So while we're in this interval where we don't
17 quite have the tools that will enable us to do what we're
18 chartered to do or what you're chartered to do, which is
19 find the least cost method, we have to instead look at
20 the landscape and say if we just leave out the new stuff
21 from the models, we're going to get steered away from
22 least cost. And so we have to cajole the Utility into
23 looking at demand response in a serious way and
24 distributed energy even more -- in an even more committed

1 way by asking for a solution that doesn't include gas
2 plants.

3 I mean, we hear over and over and over again
4 that we can't bring in the renewables without bringing in
5 gas to balance, and yet that's the claim that's being
6 countered elsewhere by choices being made elsewhere. And
7 so to confine bad outcomes driven by that stance, we have
8 to ask the Utility to come up with a plan that doesn't
9 include gas. That's their easy answer for flexibility,
10 and it's not the only answer and it's probably not the
11 least cost answer.

12 So if the Commission has an option of saying
13 present two cases, this looks like a good time to say
14 present a case that excludes buildout of fossil fuel
15 combustion on the optimistic hope that, you know, that
16 will put -- indeed, be a requirement in the future. And
17 it would be completely consistent with the Clean Energy
18 Plan to do that.

19 CHAIR MITCHELL: Thank you. I appreciate that
20 explanation.

21 COMMISSIONER CLODFELTER: Commissioner Brown-
22 Bland.

23 EXAMINATION BY COMMISSIONER BROWN-BLAND:

24 Q Ms. Lazarides, on your list -- what's on your

1 list of the top three low hanging fruit options for
2 energy efficiency if you go beyond lighting?

3 A So I'm not particularly an expert in energy
4 efficiency. The ACEEE has mapped this out extremely
5 carefully. I would like to make a couple comments about
6 demand response. May I do that?

7 Q Sure.

8 A Thank you. So from the studies that I've seen
9 from NREL, if you're looking for large demand response,
10 one of the biggest sources is municipal lighting. So if
11 we insist that when the Utility switches over from
12 whatever the lanterns are that have been in use in the
13 past to LEDs, that those fixtures be dimmable. And then
14 on those 10 or 20 days of the year when there is, you
15 know, a peak event, that muni lighting is a way of being
16 highly responsive to the increased load. And that's one
17 of the ones they identify and quantify.

18 And other ones are commercial heating and
19 cooling are major ones. If one can integrate commercial
20 heating and cooling into the system of dispatching and
21 making choices, then those are very good ones. Yeah.

22 I guess I would direct you on the EE front to
23 the EE roadmap worked out in the Clean Energy Plan, and
24 that's probably the next place I would recommend as a

1 resource in addition to materials from the ACEEE. But I
2 would be happy to do that myself, it's no problem, if you
3 would find that helpful.

4 Q Yeah. I was just curious if you had a -- if
5 you had a personal list.

6 A Well, so heat pumps are -- I mean, I'm sort of
7 tuned into the ones that also provide demand response, so
8 if you switch to electric water heaters, those can be
9 used to steer consumption away from peak times very
10 easily because exactly when our water heaters heat our
11 water is really irrelevant to our comfort. And,
12 similarly, there are ways of managing heat pumps to, you
13 know, steer consumption away from peak times.

14 So those are -- but that's -- and those are --
15 can also be efficiency solutions, but I obviously think
16 more about the demand response piece.

17 COMMISSIONER BROWN-BLAND: Thank you.

18 THE WITNESS: Sorry.

19 COMMISSIONER BROWN-BLAND: Thank you.

20 EXAMINATON BY COMMISSIONER CLODFELTER:

21 Q Ms. Lazarides, if I wanted to read more about
22 operating a nuclear unit as a load following resource,
23 where would I go? Where could I read more about that?

24 A So the folks that do it are the French.

1 Q But where could I learn more about how they
2 operate that as a load following resource?

3 A Offhand, I couldn't tell you. I just went
4 through this process myself recently. There is a
5 National Lab document that includes some mention of this,
6 but I don't have it off the top of my head.

7 Q Do you know which lab?

8 A I don't remember. No, no, no. I don't
9 remember.

10 Q Well, we'll do some research.

11 A And the Canadians have a site where they do
12 some of it, but France is the place that does the most
13 because they have the highest nuclear fraction.

14 Q Highest nuclear fraction.

15 A Yeah.

16 Q All right.

17 COMMISSIONER CLODFELTER: Anything else?

18 A Oh --

19 COMMISSIONER CLODFELTER: Oh.

20 A -- and it's not -- some of the -- there's some
21 plant equipment that is more or less amenable to being
22 retrofit --

23 Q Right.

24 A -- and so that obviously colors it. I mean,

1 our equipment may not be amenable to it. But there also
2 are a series of upgrades that can make the plant function
3 better with less damage if they're made, and make it more
4 possible for them to function in a load following. Not a
5 really fast dynamic, but some variability.

6 COMMISSIONER CLODFELTER: Thank you for coming.
7 Appreciate it.

8 (Witness excused.)

9 MS. EDMONDSON: We have one more.

10 COMMISSIONER CLODFELTER: Okay.

11 MS. EDMONDSON: Cathy Buckley.

12 CATHY BUCKLEY; Having first been duly sworn,

13 Testified as follows:

14 STATEMENT BY MS. BUCKLEY:

15 Cathy Buckley, Duke Progress, 710 Independence
16 Place, Unit 701, Raleigh.

17 I am a retired transportation planner and a
18 volunteer advocate for global cooling. And if you gave
19 me five minutes to speak tonight, I would -- within that
20 time another 365,000 tons of greenhouse gases would have
21 entered the atmosphere. Every five minutes on average
22 that's what we're putting up there, which is about the
23 weight of the Empire State Building. So what we need to
24 do is put those -- is keep those fossil fuels in the

1 ground.

2 Now, those fossil fuels that we really do need
3 to keep in the ground are worth \$28 trillion. Now, Mr.
4 Chairman, if you could earn \$28 trillion from the time
5 you were born until you turn 100, after which you're on
6 your own --

7 COMMISSIONER CLODFELTER: I wouldn't be here if
8 I could do that.

9 THE WITNESS: -- you would earn \$7,000 a
10 second. That's almost a half a million a minute. So
11 it's a huge amount of money, and that's why we're having
12 this battle about how to do that. I'm advocating that
13 Duke Energy go as quickly as possible to 100 percent
14 renewable.

15 And I wanted to acknowledge not only the work
16 you do, but I want to acknowledge the power that you have
17 as the Utility Commission. You are regulating what I've
18 heard is the most powerful utility in the country, and
19 since it's in the United States, we're talking about a
20 utility that really is going to -- what Duke Energy is
21 going to do is going to have future ramifications in the
22 world, and what you do as a Commission will, you know,
23 will be a ruling that's really heard around the world.
24 You have more power than most heads of state in terms of

1 how quickly we move to a 100 percent clean energy
2 environment.

3 So I'm thankful that you're here, and I've also
4 heard wild rumors that some Duke employees have children
5 and really want you to do the right thing, even though
6 their business plan is saying something else. So I thank
7 you for your service, and I'm looking forward to really
8 great healthy, clean, fresh energy coming into North
9 Carolina every day. Thank you.

10 COMMISSIONER CLODFELTER: Ms. Buckley, where
11 were you a transportation planner?

12 THE WITNESS: Metropolitan Boston.

13 COMMISSIONER CLODFELTER: Great. Let's see if
14 there are any questions for Ms. Buckley. Anything?

15 (No response.)

16 COMMISSIONER CLODFELTER: Thank you for coming.

17 THE WITNESS: Sure.

18 COMMISSIONER CLODFELTER: We appreciate it.

19 (Witness excused.)

20 COMMISSIONER CLODFELTER: Ms. Edmonson.

21 MS. EDMONDSON: That's all I have.

22 COMMISSIONER CLODFELTER: Folks, I'm advised
23 that those are the folks who have signed up to speak
24 tonight. If you didn't get a chance to sign up, this is

1 your last call for tonight.

2 I thank you all for coming tonight. Let me
3 tell you that -- I know you're all interested in this.
4 This is -- this process is really biennial process and
5 we're in the odd-numbered year, so what we do in the odd-
6 numbered year is we receive an update report from the
7 Utilities. The heavy lift will come beginning this fall
8 when the Utilities will file new biennial reports, and
9 those will be subject to a somewhat different level of
10 scrutiny under the statute and under the Commission's
11 rules. So this is not your last crack at it, and we hope
12 you'll stay interested and stay involved. Thank you for
13 coming tonight.

14 Anything further from the parties?

15 (No response.)

16 COMMISSIONER CLODFELTER: If not, then, again,
17 thank you for coming. We are adjourned.

18 (Proceedings adjourned.)

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STATE OF NORTH CAROLINA

COUNTY OF WAKE

C E R T I F I C A T E

I, Linda S. Garrett, Notary Public/Court Reporter, do hereby certify that the foregoing hearing before the North Carolina Utilities Commission in Docket No. E-100, Sub 157, was taken and transcribed under my supervision; and that the foregoing pages constitute a true and accurate transcript of said Hearing.

I do further certify that I am not of counsel for, or in the employment of either of the parties to this action, nor am I interested in the results of this action.

IN WITNESS WHEREOF, I have hereunto subscribed my name this 22nd day of March, 2020.



Linda S. Garrett

Notary Public No. 19971700150