

1 PLACE: Dobbs Building, Raleigh, North Carolina

2 DATE: Monday, February 8, 2016

3 TIME: 7:00 p.m. - 8:27 p.m.

4 DOCKET NO: E-100, Sub 141

5 BEFORE: Commissioner Bryan E. Beatty, Presiding

6 Chairman Edward S. Finley, Jr.

7 Commissioner ToNola D. Brown-Bland

8 Commissioner Don M. Bailey

9 Commissioner Jerry C. Dockham

10 Commissioner James G. Patterson

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IN THE MATTER OF:

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General Electric

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2015 Biennial Integrated Resource Plans and Related

16

2015 REPS Compliance Plans

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VOLUME: 1

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NORTH CAROLINA UTILITIES COMMISSION

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P R O C E E D I N G S

COMMISSIONER BEATTY: Good evening. Let's come to order and go on the record, please. My name is Bryan Beatty and I've been assigned to preside during this hearing. With me are Commission Chairman Edward S. Finley, Jr.; and Commissioners 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 2015 Integrated Resource Plan Update Reports and Related 2015 Renewable Energy Portfolio Standards Compliance Plans.

Integrated Resource Planning, or IRP, is intended to identify those electric resource options that could 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 Statutes Section 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 and G.S. 62-2(a)(3a), the Commission conducts an
2 annual investigation into the electric utilities'
3 IRPs. In odd numbered years, each of the electric
4 utilities must file an annual report updating its most
5 recently filed biennial report. Commission Rule
6 R8-67(b) requires any electric power supplier subject
7 to Rule R8-60 to file a renewable energy portfolio
8 standard, or REPS, compliance plan as part of its IRP
9 report.

10 Commission Rules also require the electric
11 utilities to include in their IRP's information on how
12 planned smart grid development would impact the
13 utilities' resource needs and they are required to
14 file Smart Grid Technology Plans every two years with
15 updates in the intervening years.

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

19 The following parties have been granted
20 intervenor status by Commission Orders: North
21 Carolina Waste Awareness and Reduction Network, or
22 NC WARN; Environmental Defense Fund; Southern Alliance
23 for Clean Energy; North Carolina Sustainable Energy
24 Association; Carolina Industrial Group for Fair

1 Utility Rates I, II, and III; Carolina Utility
2 Customers Association, Inc.; Mid-Atlantic Renewable
3 Energy Coalition; and the Sierra Club.

4 On July 1, 2015, Virginia Electric Power
5 Company, d/b/a Dominion North Carolina Power filed its
6 2015 IRP update report and REPS Compliance Plan.

7 On July 31, 2015, Dominion filed a correction to its
8 IRP update report.

9 On September 1, 2015, Duke Energy Progress,
10 Inc., and Duke Energy Carolinas, LLC, filed their 2015
11 update IRPs and REPS Compliance Plans. On September
12 9, 2015, Progress filed a correction to its IRP update
13 report.

14 On September 21, 2015, the Public Staff
15 filed a report concluding that Dominion's 2015 IRP
16 update report complied with the requirements of
17 Commission Rules.

18 On October 1, 2015, Dominion filed a letter
19 notifying the Commission that it had no significant
20 amendments to its initial Smart Grid Technology Plan,
21 which was filed on October 1, 2014.

22 Also, on October 1, 2015, Duke Energy
23 Carolinas and Duke Energy Progress filed their 2015
24 Smart Grid Technology Plan updates.

1 On October 22, 2015, the Public Staff filed
2 comments recommending that the Commission approve the
3 2015 REPS Compliance Plans filed by the three electric
4 utilities.

5 On October 27, 2015, Duke Energy Carolinas
6 filed a revision to its 2015 IRP update to reflect a
7 change in the expected retirement date of Allen Units
8 1, 2 and 3.

9 On November 2, 2015, the Public Staff filed
10 a report concluding that the Duke Energy Carolinas and
11 Duke Energy Progress IRP updates meet the requirements
12 of Commission Rules.

13 Also on November 2nd, NC WARN filed a Motion
14 Seeking Leave to File Comments on the electric
15 utilities' 2015 IRP updates. On November 9, 2015,
16 Duke Energy Carolinas and Duke Energy Progress filed
17 an objection to that Motion. The Commission issued an
18 Order November 23, 2015, denying the Motion for Leave
19 and declining to accept the comments filed by NC WARN.

20 On November 5, 2015, the Commission issued
21 an Order Approving the Smart Grid Technology Plans
22 filed by the electric utilities and declining to
23 schedule a hearing on those plans which had been
24 requested in comments filed on January 9, 2015, by the

1 North Carolina Sustainable Energy Association and the
2 Environmental Defense Fund. In the Order, the
3 Commission also requested the parties to file comments
4 in Docket Number E-100, Sub 126, proposing amendments
5 to Commission Rule R8-60.1 so that future smart grid
6 proceedings are more informative.

7 On November 23, 2015, the Commission issued
8 an Order scheduling this hearing for this date, at
9 this time, and in this place for the purpose of taking
10 non-expert public witness testimony with respect to
11 the 2015 IRP update reports and REPS Compliance Plans
12 filed in this docket by the electric utilities. The
13 Commission's Order also required the electric
14 utilities to publish notice of this hearing in
15 newspapers having general circulation in their
16 respective service areas.

17 All three companies have filed Affidavits in
18 this docket stating that the required notices were
19 published.

20 Duke Energy Carolinas, the North Carolina
21 Sustainable Energy Association and the Public Staff
22 filed comments or reply comments in this docket on the
23 issue of customers opting out of the installation of
24 advanced metering infrastructure, or AMI.

1 Comments regarding the electric utilities'
2 IRP's and AMI opt-out policies have also been filed by
3 dozens of customers.

4 Pursuant to the State Government Ethics Act,
5 I remind all members of the Commission of our duty to
6 avoid conflicts of interest and appearances of
7 conflicts, and inquire at this time whether any member
8 has a known conflict of interest with respect to these
9 proceedings.

10 (No response.)

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

13 I now call on counsel for the parties to
14 make your appearances for the record beginning with
15 the electric 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
19 and Duke Energy Progress.

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

24 MS. THOMPSON: Good evening, Commissioners.

1 Gudrun Thompson with the Southern Environmental Law
2 Center appearing on behalf of the Sierra Club and
3 Southern Alliance for Clean Energy.

4 MR. LEDFORD: Good evening, Commissioners.
5 Peter Ledford with the North Carolina Sustainable
6 Energy Association.

7 MR. GILLAM: Good evening, Commissioners.
8 I'm Bob Gillam with the Legal Division of the Public
9 Staff, and with me from the Legal Division is Tim
10 Dodge.

11 COMMISSIONER BEATTY: Good evening to all of
12 you.

13 Ladies and gentlemen, I'd like to take a
14 couple of minutes and explain how our hearing will be
15 conducted. The Commission is required by law to
16 function like a court. Decisions are based on the
17 evidence presented to the Commission during public
18 hearings, and persons who wish to speak must be
19 administered an oath and are subject to cross
20 examination by attorneys for the utilities or the
21 Commissioners. If the attorneys or Commissioners have
22 questions, they are intended to clarify or better
23 understand your comments, not to try to embarrass you.

24 In a moment, the attorney for the Public

1 Staff of the Utilities Commission, who represents
2 consumers, Mr. Gillam, will call on persons who have
3 signed up to speak one person at a time. When your
4 name is called, please come to the podium. There is a
5 Bible there and I will swear you in or, if you prefer,
6 you may affirm to tell the truth. The attorney for
7 the Public Staff will ask you to give your name and
8 address for the record and then allow you to make your
9 statement to the Commission. This is your opportunity
10 to let the Commission hear what you have to say about
11 the Integrated Resource Plans filed by the utilities.
12 Neither the Commission nor the utility can answer
13 questions during the hearing but, if you have
14 questions, the attorney for the Public Staff will be
15 happy to speak with you following the hearing and
16 representatives for the utilities may also be willing
17 to speak with you after the hearing.

18 As you can see, there is a Court Reporter
19 here, seated in front of me. She is recording
20 everything that is said at the hearing. She will
21 prepare a transcript of the hearing and it will be
22 available for public review on the Commission's
23 website.

24 We have several people here today, which the

1 Commission appreciates. While you are in the hearing
2 room please remain silent so the speaker at the podium
3 may be heard. So that we may hear as many viewpoints
4 as possible, there will be a five-minute time limit
5 for each witness. To help witnesses keep track of the
6 time, a staff member is seated here to my left. He
7 will hold up cards to let witnesses know how much time
8 they have remaining of their five minutes. Also, in
9 accordance with Commission rules, witnesses will not
10 be permitted to sing during their testimony.

11 That being said, does any counsel for any of
12 the parties wish to make comments at this time? If
13 not, then we'll call on Mr. Gillam to call your first
14 witness.

15 MR. GILLAM: Grant Matthys.

16 **GRANT MATTHYS;** was duly sworn and
17 testified as follows:

18 DIRECT EXAMINATION

19 BY MR. GILLAM:

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

22 A Grant Matthys. My address is 112 Birklands
23 Drive, Cary, North Carolina.

24 Q And are you speaking on your own behalf, as an

1 individual?

2 A Yes, sir.

3 Q Who is the utility that provides electric service
4 to you?

5 A Duke Energy.

6 Q Do you know whether that's Duke Energy Carolinas
7 or Duke Energy Progress?

8 A I'm not sure. I believe it's Progress, but I'm
9 not sure.

10 Q Well, you live in Cary and Cary is served by Duke
11 Energy Progress. Okay. Please proceed with your
12 statement.

13 A Hi there. My name is Grant Matthys and I'm here
14 to talk about Duke Energy's Integrated Resource
15 Plan. First of all, to put it simply, Duke has
16 not paid enough attention to develop solar
17 energy. It is a threat to my future because they
18 are promoting nuclear power and neglecting solar
19 power. If a nuclear power plant fails, then it
20 could affect a wide area of land and air.

21 I am not the average kid playing
22 sports, instead I am at home researching solar
23 energy and environmental protection. I have
24 passion for this topic and I do not wish to think

1 of what will happen when I am an adult. I want
2 it to be a clear, beautiful planet. I don't want
3 it to be what it's going to be if we don't do
4 anything.

5 Most all of you Commissioners here
6 have kids or, and grandkids. Do you think about
7 what the environment your kids will grow up in?
8 I'm a big supporter on environmental protection
9 and I love to learn about and to use solar
10 panels, generators and other local sources of
11 energy.

12 I may be young but I'm old enough
13 to know all the scary things we are doing to this
14 world. Many times I think of what life would be
15 like if there is no such thing as a factory, if
16 there is no such thing as pollution. In my mind,
17 I picture a haven, lush green forests, many
18 extinct animals alive, birds and wildlife all
19 around me. Then I look at reality - the awful
20 stench of Canton's paper mill, the miles and
21 miles of asphalt and pavement, the haze of
22 polluted cities, landfills full of trash that has
23 not and never will disintegrate; this list could
24 go on forever. Is this what you want for your

1 kids?

2 We, as a population of over seven
3 billion people, need to take action. I have
4 often read and quoted that not one person nor
5 item will fix this problem. It will take
6 everyone's combined power to fix what we have
7 done to earth.

8 Before, in Duke Energy's
9 Integrated Resource Plan, they said that they
10 would focus more on solar generation. This is a
11 good source of energy for starting to go to the
12 right path. So I'm asking for the Utilities
13 Commission's help to spread the word and require
14 Duke Energy to do more about solar energy. Their
15 long-term plan is to only -- only to generate
16 4 percent of renewable energy. Solar energy will
17 not go away. It does not pollute and is fairly
18 cheap; not to mention, it is a low-maintenance
19 source of free electricity. The sun doesn't
20 charge us for its light, so why don't we take
21 advantage of that?

22 I'm asking you here today for
23 support to make Duke Energy rewrite their IRP
24 saying that they will focus more and allocate

1 more energy demands to solar energy, such like
2 photovoltaic cells and heliostat power plants.
3 Another source is solar heating and cooling
4 sources. They have a return on investment in as
5 little as three to six years. If Duke uses solar
6 cooling, it could cool the generators without
7 using harmful resources. A fact that we should
8 all be aware of is that on average one
9 kilowatt-an-hour produces over a little, over a
10 little more than one pound of carbon dioxide.
11 So, if Duke Energy converts one percent, just one
12 percent of the nuclear generation into solar, it
13 would prevent 3.57 tons or 7,140 pounds of carbon
14 dioxide being released into the air per hour.

15 Thank you for letting me be here
16 today. And, please, let's take the right path.
17 Let us have a clean world for our children and
18 our children's kids. Again, thank you.

19 Q Thank you very much, Mr. Matthys. You mentioned
20 that you are young, could you tell us your age?

21 A Fourteen.

22 MR. GILLAM: Thank you. No further
23 questions.

24 COMMISSIONER BEATTY: Any other questions

1 for Mr. Matthys? Thank you very much, Mr. Matthys.
2 We appreciate you coming this evening.

3 MR. MATTHYS: Thank you.

4 (The witness is excused.)

5 MR. GILLAM: Colson Combs.

6 **COLSON COMBS;** was duly sworn and
7 testified as follows:

8 DIRECT EXAMINATION

9 BY MR. GILLAM:

10 Q Would you state your state your name and address
11 for the record, please?

12 A My name is Colson Combs. My address is 135
13 Cattle Farm Drive, Raleigh, NC.

14 Q And you're speaking as an individual, not for any
15 organization?

16 A Yes.

17 Q Who is the utility that provides electric service
18 to you?

19 A Duke Energy Progress.

20 Q Okay. Please make your statement to the
21 Commission?

22 A Hi, my name is Colson Combs. Thank you for the
23 chance to speak today. I am here to express some
24 of my concerns with Duke Energy's proposed IRP

1 update.

2 I do not think that Duke focuses
3 enough on renewable energy and on solar power, in
4 particular, in its IRP. Four percent renewable
5 energy and five percent energy efficiency in 2029
6 is ridiculously low. Four percent renewable
7 energy and five efficiency does not even come
8 close to comparing with Germany's astounding 80
9 percent renewable energy and, on a good day,
10 50 percent solar.

11 Duke Energy is a bully. Just
12 allowing the people to suffer because they cannot
13 assume responsibility of their hazardous coal ash
14 ponds does not give me the impression of a
15 well-run, uncorrupted company. This is just one
16 example of Duke's shadiness. Another example is
17 how Governor McCrory met with Duke Chief
18 Executive Lynn Good, and no one will say why.
19 You just have to wonder, why is it so important
20 to keep the meeting a secret? What does Duke
21 have to hide? Consider the fact that Governor
22 McCrory worked for Duke Energy for almost 30
23 years. Here's one more. Duke Energy is actively
24 working to shut down the solar program used by a

1 small church, a small church named Faith
2 Community Church. You'd think that a large,
3 prosperous company like Duke Energy would at
4 least be able to refrain from attacking the small
5 church and the non-profit that supports them.
6 Furthermore, utility companies shouldn't be the
7 only ones who are allowed to sell solar power to
8 the people. It's just solar power - not nuclear,
9 not coal, not gas - just solar. Why is Duke so
10 threatened by a small church that wants to help
11 the environment by using clean energy?

12 We need the Utilities Commission's
13 help. I am 12 years old and I can't help but
14 worry about my future. I need your help to
15 ensure the safety of the kids of my generation.
16 For every one degree Celsius increase caused by
17 CO2, there are annually a thousand more deaths
18 and many more cases of asthma and respiratory
19 illness in the U.S. 1000 more lives lost. Has
20 Duke Energy even considered the cost in lives
21 that carbon dioxide pollution will bring? The
22 numbers show that CO2 pollution needs to stop.
23 Many of you have children and grandchildren. Is
24 that what you want for them, a world of pollution

1 and sickness? I know that's not what I want. So
2 please require that Duke Energy significantly
3 increase its solar power plans in its IRP. Thank
4 you for your time and your help.

5 MR. GILLAM: Thank you. No questions.

6 COMMISSIONER BEATTY: Questions? Thank you
7 very much, Mr. Combs.

8 (The witness is excused.)

9 MR. GILLAM: Caroline Heaphy.

10 **CAROLINE HEAPHY;** was duly sworn and
11 testified as follows:

12 DIRECT EXAMINATION

13 BY MR. GILLAM:

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

16 A I am Caroline Heaphy. I live on 200 Strathburgh
17 Lane in Cary, North Carolina.

18 Q And are you here speaking as an individual?

19 A Yes.

20 Q Who is the electric utility that provides service
21 to you?

22 A Duke Energy Progress.

23 Q May I suggest that you pull the microphone a
24 little bit closer to you. That might be easier

1 than leaning forward. Please proceed with your
2 statement.

3 A Hello, I am Caroline Heaphy. And before I start,
4 I would like to thank you for letting me speak
5 here.

6 I am here to talk about how Duke
7 Energy's proposed Integrated Resource Plan is
8 affecting my future in many negative ways. I am
9 asking for the Utilities Commission's help to
10 support solar energy. The IRP has not focused
11 enough on solar energy, just after they claimed
12 they would focus on it more.

13 North Carolina should be more like
14 San Diego. San Diego has a goal of 100 percent
15 renewable energy in 20 years. In order for us to
16 have more renewable energy, Duke Energy needs to
17 change their IRP. Even Germany, a country
18 twenty-seven and a half times smaller than the
19 USA, has 80 percent renewable energy. Assuming
20 that the USA would catch up to Germany, North
21 Carolina would be the last state to reach USA's
22 goals if we keep up like this. Even in health
23 class the other day we talked about how we need
24 clean air to breathe, but the IRP does not have

1 us breathing clean air. These are just some of
2 many reasons Duke Energy needs to change their
3 IRP. Thank you for listening. And for my future
4 and every kids' future, please make Duke Energy
5 add more renewable and solar energy to their IRP.

6 MR. GILLAM: Thank you. No questions.

7 COMMISSIONER BEATTY: Any questions? Thank
8 you very much, Ms. Heaphy.

9 (The witness is excused.)

10 MR. GILLAM: Asiyah Ibrahim.

11 COMMISSIONER BEATTY: She may affirm if she
12 wishes.

13 MR. GILLAM: She would like to affirm.

14 **ASIYAH IBRAHIM;** was duly affirmed and
15 testified as follows:

16 DIRECT EXAMINATION

17 BY MR. GILLAM:

18 Q Please state your name and address for the
19 record?

20 A Asiyah Ibrahim, 4500 Fairview Ridge Lane, Apex,
21 NC.

22 COMMISSIONER BEATTY: Could you please spell
23 your name for the Court Reporter here?

24 THE WITNESS: A-S-I-Y-A-H I-B-R-A-H-I-M.

1 COMMISSIONER BEATTY: Thank you.

2 BY MR. GILLAM:

3 Q Are you here speaking as an individual rather
4 than on behalf of a group?

5 A Individual.

6 Q Who is the utility that provides service to you?

7 A Duke Energy Progress.

8 Q Please proceed with your statement.

9 A Hello, my name is Asiyah Ibrahim. First, I want
10 to start off by thanking the Commissioners for
11 taking a period of their time to listen to my
12 speech. I'm here today speaking about Duke
13 Energy's Integrated Resource Plan. I am asking
14 for the Utilities Commissioners to be more
15 involved in solar energy.

16 Germany, a country with a
17 population of 80.62 million has done a better job
18 with 80 percent renewable power with 50 percent
19 of it being solar. Duke only has 0.02 percent of
20 solar power. Compare Germany to Duke.

21 While a majority of the world's
22 current electricity supply is generated from
23 fossil fuels such as coal, oil and natural gas,
24 these traditional energy sources face a number of

1 challenges including rising prices, security
2 concerns, over-dependence on imports from a
3 limited number of countries which have
4 significant fossil fuel supplies and growing
5 environmental concerns over the climate change
6 risk associated with power generation using
7 fossil fuels. As a result of these and other
8 challenges facing traditional energy sources,
9 governments, businesses and consumers are
10 increasingly supporting the deployment of
11 alternative energy sources and new technologies
12 for electricity generation. Renewable energy
13 sources such as solar, biomass, geothermal and
14 hydro electric, and wind power generation have
15 emerged as potential alternates, which address
16 some of these concerns as opposed to fossil fuels
17 which draw a finite -- finite resources that may
18 eventually become too expensive to retrieve.
19 Renewable energy sources are generally unlimited
20 in availability.

21 Solar power generation has emerged
22 as one of the most rapidly growing renewable
23 sources of electricity. Solar power generation
24 has several advantages over other forms of

1 electricity generation. The most common known
2 benefit of -- concerning solar power is that it's
3 a clean, green source of energy that pollutes
4 less than almost every other source of energy.
5 Solar power doesn't produce greenhouse gases and
6 it doesn't pollute water or any other part of
7 nature. Other than that, solar power is almost
8 self-sufficient and only requires a little water
9 to work. The most of costs towards solar power
10 comes from installing of solar paths, panels and
11 solar cells, and it is that money that pays for
12 other peoples' salaries. The more people who
13 choose to make us -- use of solar power, the more
14 people we need to install and maintain the solar
15 power, which helps our mutual national income
16 economy.

17 Thank you for listening and please
18 take my facts into consideration.

19 MR. GILLAM: Thank you. No questions.

20 COMMISSIONER BEATTY: Any questions for

21 Ms. Ibrahim? Thank you, ma'am.

22 (The witness is excused.)

23 MR. GILLAM: Larry Burk.
24

1 **LARRY BURK;** was duly sworn and
2 testified as follows:

3 DIRECT EXAMINATION

4 BY MR. GILLAM:

5 Q Would you state your name and address for the
6 record?

7 A Yes, Larry Burk, 2713 Winton Road, Durham 27707,
8 and Duke Energy is my power company. I don't
9 know whether it's Progress or Carolina.

10 Q In Durham, I expect it would be Duke Energy
11 Carolinas. Are you here speaking as an
12 individual?

13 A Yes.

14 Q And have you previously filed comments in written
15 form as a consumer statement of position letter
16 in this case?

17 A Yes.

18 Q Please proceed with your statement.

19 A I am a radiologist and I've been doing Magnetic
20 Resonance Imaging for over 30 years. I was one
21 of the first to write academic papers on an MRI
22 of the knee and MRI of the shoulder, which are
23 now -- and back in the '80's that was an
24 experimental technique. We didn't know what we

1 were doing. We were testing things out to see
2 how they worked. It turns out now it's in common
3 use everywhere around the world. Back in those
4 days, I also joined the National Safety Committee
5 on MRI because, frankly, we didn't know what
6 health affects were going to happen putting
7 millions of people in these MRI scanners.

8 The long-term effects over the
9 last 30 years appear to be negligible in terms of
10 health risks for putting someone in an MRI scan,
11 pulsing them with what was essentially a
12 high-powered wireless device -- and we're careful
13 to keep them underneath the thermal limit so we
14 don't heat them up because you could cook someone
15 in an MRI scanner if you cranked it up and so
16 that has limits for that -- so the effects of the
17 MRI scanner are strictly at the athermal level.
18 It resonates with the hydrogen protons in your
19 body and it sends a picture back and the computer
20 turns it into a magic picture.

21 So I decided to go investigate
22 this in a little more detail by going to some of
23 the academic societies, the Bioelectromagnetics
24 Society in particular, where engineers and

1 physicists and other people concerned with the
2 basic science of these modalities would give me a
3 little more understanding into what happens if
4 you chronically expose someone to these fields.
5 And I was relieved to find out that they didn't
6 think a short-term exposure would be of any harm.
7 But I was alarmed to find out that there were a
8 significant number of basic science studies
9 showing that chronic exposure to wireless fields
10 causes health damage. And that was back in the
11 early days when the main concerns were radar and
12 power lines. But since -- in the last 30 years,
13 the use of wireless devices has really exploded,
14 and the data accumulated by these scientists is
15 accumulating rapidly and exponentially and
16 becoming even more alarming to the point where
17 they've -- and they're classifying them as stage
18 2 to be potential carcinogens.

19 And in my house I can read my MRI
20 scans without any wireless devices and it works
21 perfectly well. I've gotten rid of all my
22 wireless devices. I do everything on a wired
23 system. I think the real issue we're facing now
24 is that MRI has proven benefits and the health

1 risks are negligible.

2 In terms of smart meters, the
3 benefits are questionable and the health risks
4 are uncertain at best and suspicious, if you
5 really look into the literature on wireless
6 devices. So I'm not seeing the cost benefit
7 analysis being coming down in favor of a smart
8 grid when I'm not convinced that it's saving us
9 any money and I am concerned that it's exposing
10 us all to potential long-term risks from magnetic
11 fields. It reminds me a lot, unfortunately, of
12 the early days of tobacco research where they
13 reassured us that there was really no health risk
14 to any of these things and, in the meantime,
15 their scientists knew there were health risks and
16 they were covering it up. We're in the same
17 exact situation now because the papers -- in my
18 statement there's a paper that documents the
19 studies that are funded by the industry that show
20 no health effects. All of the studies funded by
21 independent sources, all show health effects.

22 I've had four friends die of
23 malignant brain tumors from -- who were heavy
24 cell phone users. So these are all cautionary

1 things we should be keeping in mind. And I think
2 the precautionary principle is certainly the
3 place to start. That means that it's really the
4 onus is on the utility companies to prove these
5 are safe, not on us to prove that there is a
6 harm, and they have not proven that these are
7 safe, and I think the benefits are also
8 questionable. So I would urge us to make smart
9 meters be -- a lot of people to substitute the
10 extended analog meters, if they want, and there
11 would be no charge for that. That concludes my
12 comments.

13 Q Thank you. Let me ask you one or two questions.

14 A Sure.

15 Q You mentioned that you have friends that have
16 suffered --

17 CHAIRMAN FINLEY: Mr. Gillam, pull your mike
18 up so we can hear you, please.

19 BY MR. GILLAM:

20 Q You had some friends that have suffered cancer
21 related to cell phone use.

22 A Uh-huh.

23 Q And that's comparable to these smart meters, the
24 hazard is comparable?

1 A I'm not an expert on the technology of the
2 particular wireless devices. It is a wireless
3 exposure to electromagnetic radiation. And the
4 exposure from a smart meter is chronic, much like
5 the cell phone use is chronic. The frequencies
6 may be different. The intensity may be
7 different. And a lot of it depends on whether
8 you have the smart meter against your bedroom
9 wall or if it's a block away. There's a
10 difference.

11 Q Now, would televisions and the routers that
12 enable us to get the internet on our computers,
13 would they also be wireless devices?

14 A As I said, I work from home with no wireless
15 devices. Time Warner Cable comes into my house.
16 I don't have any wireless routers in my house. I
17 do all of my work without any wireless.

18 MR. GILLAM: No further questions.

19 COMMISSIONER BEATTY: Any other questions?

20 Thank you very much, sir. We appreciate you coming
21 this evening.

22 (The witness is excused.)

23 MR. GILLAM: Michele Dubow.

24

1 **MICHELE DUBOW;** was duly sworn and
2 testified as follows:

3 DIRECT EXAMINATION

4 BY MR. GILLAM:

5 Q Would you state your name and address for the
6 record?

7 A Michele with one L, Dubow, D-U-B-O-W, 3210
8 Lassiter Street, Durham, 27707.

9 Q Are you here speaking as an individual?

10 A Yes, I am.

11 Q And being from Durham, I suspect that you are
12 served by Duke Energy Carolinas; is that your
13 understanding?

14 A Yes, it is my understanding.

15 Q And have you filed with the Commission, prior to
16 this hearing, written comments as a consumer
17 statement of position letter?

18 A Yes, I did. And I also have a copy of these
19 comments in writing if you would like them, the
20 comments from this evening.

21 Q Thank you. Please proceed with your comments.

22 A Thank you. Good evening, Commissioners. My name
23 is Michele Dubow and I live in Durham, North
24 Carolina, and I have Chronic Fatigue Syndrome and

1 thyroid autoimmune illness. I'm speaking today
2 to tell you how I am physic -- how I physically
3 experience radiation from sources similar to
4 smart meters so that you can create conditions
5 for citizens like myself with health problems, or
6 others, to easily and with no cost opt out of
7 smart meters in their homes and businesses. I
8 cannot yet prove, but I strongly suspect that
9 radiation exposure is contributing to and
10 exacerbating, if not causing, the medical
11 symptoms I experience. It certainly seems to be
12 causing symptoms that are directly related to my
13 exposures.

14 I have an undergraduate degree
15 from Wellesley College and a Master of Science in
16 Public Health degree from the University of North
17 Carolina at Chapel Hill. I specialized in
18 Environmental Science and Protection and I worked
19 for the U.S. EPA for almost 20 years as an
20 environmental scientist developing national air
21 quality regulations and policy, and doing
22 outreach and training. In other words, I spent
23 my career regulating environmental health risks.

24 In 2007, I developed fatigue,

1 cognitive dysfunction and other symptoms that
2 were so severe I could no longer do my job. In
3 2008, I was diagnosed with Chronic Fatigue
4 Syndrome and I was forced to leave public service
5 for medical reasons on disability retirement; I
6 am still not able to work. Chronic Fatigue
7 Syndrome, sometimes called Myalgic
8 Encephalomyelitis, is a severe, complex
9 neurological disease that affects all body
10 systems, especially the nervous, endocrine and
11 immune systems, and it is considered more
12 debilitating than most diseases. Some of the
13 classic symptoms which I experience include
14 unrelenting fatigue; inflammation especially in
15 the head, throat and joints; psychological
16 symptoms such as depression; and hyper-reactivity
17 to stress of any kind, including environmental
18 stressors.

19 In recent years, I have -- I'm
20 going to speak a little faster. In recent years,
21 I have become increasingly aware of disabling and
22 painful symptoms I experience when I am near
23 sources of EMF radiation such as cell phones,
24 high-intensity power lines, traffic lights at

1 busy intersections, GPS devices, computer
2 monitors and others. Here are some examples that
3 are not exclusive: When I'm near cell phones or
4 GPS devices that are actively communicating with
5 satellites or towers, especially inside
6 automobiles or buildings, I experience acute and
7 severe pain in my head and ears that lasts a long
8 while and leaves me feeling sick, fatigued and
9 depressed, when I was not feeling those things
10 moments before. If I drive near high power lines
11 or cell phone towers, I can feel throbbing in my
12 head and jaw, and while waiting at intersections
13 my heart often starts to fibrillate
14 uncomfortably. I can walk into a building or
15 room, and sometimes near electrical devices,
16 whether I know there is something present or not,
17 and feel pressure in my head, ears, throat and
18 chest. The feelings are so intense, I sometimes
19 feel as if I have been struck in the head, and
20 I've asked many people not to use their cell
21 phones in the car when I'm present, or I've had
22 to move to another seat in a room with a group,
23 or leave that space altogether, when people are
24 using their devices. After these exposures, I

1 usually experience increased fatigue, cognitive
2 scrambling, inflammation, and insomnia. It has
3 been documented that once a person reaches the
4 environmental sensitivity tipping point into
5 disability, the response time decreases and the
6 magnitude of the response increases, and I
7 believe that is what is happening to me over
8 time.

9 I am deeply concerned with the
10 observed and likely health effects documented to
11 be associated with long-term, low-level exposure
12 to EMF and radio frequencies from the sources I
13 mentioned and smart meters. I believe I am a
14 person who is especially sensitive to these
15 exposures, and my health and ability to live
16 productively and comfortably depend on reducing
17 my exposures. I will seek to be recognized as
18 disabled by EMF with the U.S. Access Board under
19 the Americans with Disabilities Act.

20 I have two smart meters, power and
21 gas, within a few feet of where I stand in the
22 kitchen at my sink and stove, and the smart water
23 meter is 30-feet away at the street. I object to
24 Duke Energy's lack of definitive advance metering

1 system opt-out procedure information in it's 2015
2 Smart Grid Technology Plan update, and I urge
3 you, Commissioners, to reject any one-time and
4 monthly tariffs that Duke Energy might seek to
5 impose on citizens who request to opt out of a
6 smart meter for health or other reasons.

7 I also urge you to establish
8 provisions for citizens to reasonably, easily and
9 without undue delay, opt out of smart meters so
10 they can protect their health in a timely way and
11 without unnecessary obstruction from Duke Energy
12 or other utility providers, as the actions you
13 take with regard to Duke Energy may be precedent
14 setting for other utilities in North Carolina and
15 in other states.

16 I thank you for your time and
17 attention today and for your careful
18 consideration of this issue from the perspective
19 of citizens, like myself, who already have
20 environmental health sensitivity or who may
21 develop it and require avoidance of smart meter
22 radiation to protect their health.

23 Q Thank you, Ms. Dubow.

24 A Thank you.

1 Q You mentioned EMF, what does that stand for?

2 A I believe it stands for electromagnetic
3 frequencies or something similar.

4 MR. GILLAM: Thank you. I have no further
5 questions.

6 COMMISSIONER BEATTY: Any other questions
7 for Ms. Dubow? Thank you very much ma'am. I
8 appreciate you coming out to testify tonight.

9 (The witness is excused.)

10 MR. GILLAM: Beth Slusher.

11 **BETH SLUSHER;** was duly sworn and

12 testified as follows:

13 DIRECT EXAMINATION

14 BY MR. GILLAM:

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

17 A It's Kathleen Elizabeth Slusher. I go by Beth.
18 And it's 1221 Silent Brook Road, Wake Forest,
19 North Carolina 27587.

20 Q And are you here on your own behalf as an
21 individual?

22 A Yes, I am.

23 Q And who is the organization that provides
24 electric service to you?

1 A Wake Electric.

2 Q Have you filed a consumer statement of position
3 letter that sets out your views in this case?

4 A No, I have not.

5 Q All right. You don't have to. Please proceed
6 with your statement.

7 A My parents do live in Raleigh and they do have
8 Duke Energy and I spend a lot of time at my
9 parents' house and so do my three children and so
10 I am concerned for us and my parents.

11 Two of my main concerns with the
12 smart meters is the health issues and the privacy
13 issues. I had noticed a difference when I had
14 the Wi-Fi on my computer. I used to know that my
15 toes would start tingling and sometimes they
16 would go numb. And after doing some research on
17 Wi-Fi, I realized that it might be the Wi-Fi
18 causing that so I turned off my Wi-Fi and that
19 stopped happening. And so I did a little
20 experiment and I would turn my Wi-Fi on at the
21 computer and my toes would always start tingling
22 and if I stayed on the computer long enough, for
23 like an hour, they would go numb. And my
24 daughter said she had the same experience. She

1 was 11 and she didn't have any health issues and
2 she was in really good shape, and she had the
3 same exact experience. So we decided to get rid
4 of the Wi-Fi in my house so we don't use that
5 anymore and I haven't had any problems.

6 But I am concerned because we have
7 a smart meter real close to one of our bedrooms
8 so I'm concerned for the safety of my children.
9 I don't know when the RF radiation is emitted. I
10 don't know if it's when they're sleeping in their
11 bedroom at night. And I don't know, when the
12 children are outside playing, if that is when the
13 Wi-Fi is distributed from house-to-house.

14 Because I know that we're in a neighborhood and
15 my parents are in a neighborhood where the Wi-Fi
16 radiation goes from one house to the next. It's
17 transferred from one meter to the next meter.
18 And then there is usually a collection house and
19 the people in that house, they get everybody's
20 Wi-Fi coming from all the houses, and then it's
21 distributed from the collection spot sometimes to
22 a telephone line or other collection pathways.
23 But I'm concerned, you can't see the radiation.
24 So, if my children are outside playing, I don't

1 know if they're in the spot where the radiation
2 is being carried through from one house to the
3 next and I don't know if when they're sleeping in
4 their beds at night how often they're being
5 bombarded with the radiation.

6 It is the thermal effects that are
7 usually looked at but I've been researching and
8 there's a lot of other effects that scientists
9 are concerned about. And a lot of people say
10 that, when there are short bursts of radiation,
11 it affects your body differently than let's say
12 if you're using a microwave or something and
13 you're around radiation and it's more of an even
14 balance or an even distribution. But when you
15 have those little short bursts like the smart
16 meters do, sometimes they say that's actually
17 more harmful to your body and your body can't
18 adjust to it in the same way.

19 Another concern I have is the
20 privacy. Because the smart meters are able to
21 collect a lot of realtime data and so that it
22 would be easy, especially with all the computer
23 technology we have now. There's a lot of
24 computer programs that can compile a lot of data

1 on people. And so you can tell, for instance,
2 like if you get up at eight clock every morning
3 and you're turning on the light switches and
4 using your hairdryer, using your microwave or
5 your oven, it's obviously, obvious that you're up
6 and you're getting ready for work or school. And
7 then maybe at nine o'clock you cut all the lights
8 off and you stop using electricity and you're
9 gone for the day and maybe you come home at six
10 o'clock, well you turn on all the lights and
11 start watching TV, doing all these things. So
12 it's obviously that you're gone for like, from
13 maybe like from nine til six. So your daily
14 habits and your daily patterns can be -- they can
15 be seen real obviously in a computer program.
16 Profiles can be made on people. And you will be
17 able to see real easy in a chart that this person
18 is gone most of the time from these hours during
19 the day; this is when they go on vacation; this
20 is when they're eating supper, so there's a lot
21 of personal information that could get out. And,
22 if people could hack into the smart meter data,
23 then people that wanted to rob somebody's house
24 or do something mischievous, they might can get

1 their hands on that information so that is a big
2 concern. So I would like it if we could get
3 smart meter opt-outs. Thank you.

4 COMMISSIONER BEATTY: Any questions for
5 Ms. Slusher? Thank you, ma'am.

6 (The witness is excused.)

7 MR. GILLAM: Andrew McAfee.

8 **ANDREW McAFEE;** was duly sworn and
9 testified as follows:

10 DIRECT EXAMINATION

11 BY MR. GILLAM:

12 Q Would you state your name and address for the
13 record, please?

14 A My name is Andrew McAfee, 6135 Westglen Drive in
15 Raleigh, North Carolina 27612.

16 Q Are you testifying as an individual tonight?

17 A Yes, I am.

18 Q Who is the electric utility that provides service
19 to you?

20 A I believe it is Duke Energy Progress.

21 Q Have you filed a consumer statement of position
22 with the Commission?

23 A I have.

24 Q Please proceed with your statement.

1 A Thank you. Thank you, Commissioners, for hearing
2 our testimonies. I really appreciate your time.
3 I submitted a document that has extensive
4 research information and I don't expect every one
5 to go through it, so I'd like to supplement just
6 a couple of highlights here tonight. And I
7 believe that one of the items of the IRP is least
8 cost and there are a number of different kinds of
9 costs and what I'm going to bring you tonight is
10 the health cost.

11 I am someone who is electrically
12 sensitive. My wife and I as newlyweds moved into
13 a brand new house, young, happy and in love,
14 after about six months we both were very sick.
15 It took us a long time to figure out that living
16 next to a TV tower and in a home with wiring
17 problems had made us very ill. We quickly moved
18 after fixing the wiring problems but we both
19 learned that we were somehow now allergic to
20 wireless radiation and I could feel towers as I
21 would drove by. Of course, I couldn't use my
22 cell phone any longer and we actually had to move
23 again because we could feel the cell tower and
24 radio towers near our home. I currently live in

1 North Raleigh in a brick home at least a mile
2 from a cell tower and I live a life where I
3 basically have to have everyone around me know
4 that here comes Andrew, you better turn your cell
5 phone off.

6 I was the Principal Horn of the
7 North Carolina Symphony. I enjoyed a life at the
8 top of a professional musician's career and
9 aspired to be the Principal Horn of the Chicago
10 Symphony. I am no longer able to function in
11 that environment. Case in point, I left in 2007
12 after 15 years being Principal Horn. And I tried
13 to keep my career going and faculty at UNC were
14 compassionate with my situation, and I have a
15 basement in Hill Hall where I teach and there's
16 no Wi-Fi in there so I can continue working. I
17 have been trying to keep playing my horn in local
18 organizations like the NC Opera and the Chamber
19 Orchestra of the Triangle and, just recently, I
20 had to withdraw my services from the NC Opera
21 because the backstage crew at Meymandi refused to
22 turn the Wi-Fi router off. They had done it a
23 couple of times before but they were afraid of it
24 starting a precedent for other people.

1 So my life is directly affected by
2 Wi-Fi radiation. And how this has to do with
3 smart meters specifically, about 2007, 2008 my
4 health started to deteriorate again after I had
5 gotten much better from my initial onslaught.
6 And I've been helping a lot of other people with
7 my condition. I have a number of electric meters
8 that tell wireless radiation. I took my meters
9 out and I discovered that the meter on our home
10 had been replaced and a new electric meter had
11 been put on that emits wireless radiation. I
12 fought with Duke for a number of months and
13 finally was able to get the meter off and also my
14 neighbor's meter off. Within a year, my health
15 descended again and I couldn't imagine that that
16 meter would have been switched back, but it was.
17 I irately called Duke again saying how could you
18 do this knowing that I am a person that is made
19 deathly ill around this type of radiation and, of
20 course, they apologized. But the insensitivity
21 that Duke has to people with this condition is
22 unacceptable. There are now estimated -- between
23 3 and 15 percent of our populace is now called
24 electrically sensitive. That could range from

1 just getting a little bit of eye fatigue in front
2 of your computer monitor or actually having a
3 little headache after you've been on your cell
4 phone a while, it ranges. For me, it's
5 debilitating. I can go into the symptoms that
6 are very long but I invite you to look at the
7 papers I've submitted on electrical sensitivity.

8 So the healthcare costs, my
9 website, Raleighs.info, is dedicated to help
10 other people with my condition, and I get calls
11 from all over the country and North Carolina, of
12 people that have lost everything. They are
13 living out of their cars. They have no more
14 money because the doctors threw up their hands
15 and said *I can't help you anymore. I don't know*
16 *what you have and we've tried everything, every*
17 *antibiotic we can. We don't know what you have.*
18 They've lost their family because of
19 psychological problems. They are no longer a fit
20 parent and they're living out of their homes --
21 they're living out of their cars. So when you
22 consider a cost benefit, please consider the
23 health cost of people like me being around a
24 smart meter that produces radiation, not only

1 through the air but affects the wiring in the
2 home.

3 A smart meter is a very efficient
4 device where it has a switch-mode power supply
5 that nibbles off of the electricity to get its
6 own power supply. It has a five-year battery
7 inside of it that also records when the power is
8 out, which we haven't accounted for how we're
9 going to replace those after five years. But the
10 switch-mode power supply is connected
11 phase-to-phase on the home, 120, 120; that is the
12 first time it's ever happened. Analog meters
13 don't do that. Our appliances in the house fight
14 with the smart meter and set up a transient
15 spike. So we're actually experiencing in the
16 home a new health phenomenon we call "dirty
17 electricity". And through the dirty electricity
18 we are experiencing AM waves and other radiation
19 being beamed out of our lights, beamed out of our
20 screens and it's costing people with health
21 problems, with blood sugar spikes, hormonal
22 swings, on and on from headaches, and people
23 would never even think that this coming from the
24 wiring in their home, like I didn't think when I

1 first got sick. This is a real consideration as
2 well as the smart meter's ability to collect
3 data.

4 I brought a little graph here. I
5 welcome you to see how the data that a smart
6 meter can collect can be analyzed later and your
7 behavior can be tracked; whatever you've been
8 doing all day - if you have a grow house in your
9 basement, if you have any abnormal behaviors, if
10 you're not in the home or out of the home - all
11 of that data has been collected and is just
12 waiting for state agencies, local agencies, or
13 GE, Walmart, to have that information about what
14 kind of behaviors you have. And in the future,
15 the smart meter is going to be collecting
16 intimate data about your refrigerator use, about
17 AC, heating and that information is going to be
18 sold. And that's how Duke Power wants to make
19 back some of its energy -- back some of its money
20 that it's losing from energy-conservative
21 products. So the cost is to the consumer, both
22 health-wise as well as not being compensated by
23 this extracted information from us. In fact,
24 we're being forced to change our behavior, which

1 is another cost, that the way they want to make
2 their money back is by raising rates by TOU,
3 time-of-use data, in the middle of the day. And
4 we say WOW the rates are going up so much I
5 should turn off the AC unit.

6 COMMISSIONER BEATTY: Mr. McAfee, I've been
7 told your time is up. Can you wrap it up very
8 quickly?

9 A And this sort of forced behavioral change to
10 reduce the amount of usage is not a cost saving.
11 That's a forced behavioral change in order to
12 reduce cost. There are no cost-saving measures
13 in the smart meter at all. If anyone says that,
14 they are just simply ignorant or being paid to
15 say so. The only way it will save money is by
16 forcing people to change their behavior. Thank
17 you very much.

18 COMMISSIONER BEATTY: Questions for
19 Mr. McAfee?

20 MR. GILLAM: No questions.

21 COMMISSIONER BEATTY: Thank you very much,
22 sir.

23 MR. McAFEE: Thank you.

24 COMMISSIONER BEATTY: Did you want, the

1 chart that you had, was that in the submission that
2 you made previously?

3 MR. McAFEE: I did not and hoped to bring it
4 here just so you could just take a look at it. I'm
5 not sure what will be seen from my submission. If I
6 can pass this around, you can just take a quick look
7 and see what a smart meter can tell about your life.

8 COMMISSIONER BEATTY: We'll have that marked
9 as McAfee Exhibit Number 1.

10 MR. McAFEE: Thank you.

11 COMMISSIONER BEATTY: We'll put that in the
12 record.

13 McAfee Exhibit 1

14 (Identified and Admitted)

15 (The witness is excused.)

16 MR. GILLAM: Laura Combs.

17 **LAURA COMBS;** was duly sworn and
18 testified as follows:

19 DIRECT EXAMINATION

20 BY MR. GILLAM:

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

23 A My name is Laura Combs and I'm at 135 Cattle Farm
24 Drive, Raleigh, North Carolina 27603.

1 Q Are you testifying as an individual rather than
2 on behalf of any organization?

3 A Yes, as an individual.

4 Q Who is the utility that provides service to you?

5 A Duke Progress.

6 Q Have you submitted a consumer statement of
7 position letter?

8 A Yes, sir.

9 Q Please proceed with your statement.

10 A Thank you, Commissioners, for taking my comments
11 tonight. I am here to talk about two issues
12 related to the Integrated Resource Plans: Smart
13 meters and solar power. And I don't think I'll
14 have time to get to the solar part of my
15 discussion.

16 I am someone who wakes in the
17 middle of the night and once I figured out that I
18 should turn my wireless router off, I no longer
19 wake in the middle of the night. So I have great
20 concern about future installation of smart meters
21 and the impacts on my health and my sleep.

22 My first concern, as I said, is
23 deployment of smart meters by Duke Energy as Duke
24 is the leader in the State of North Carolina and

1 what happens in our utility industries. As you
2 know, Duke is deploying about 200,000 smart
3 meters in their Charlotte area and more will be
4 deployed in other areas of the state. Rightly,
5 the North Carolina Utilities Commission has
6 required that Duke create an opt-out policy.
7 Wrongly, the details of the draft opt-out policy
8 are confidential and will not be revealed until
9 Duke Energy files for Utilities Commission
10 approval in 2016. Further, it is unknown if the
11 public will have an opportunity to provide formal
12 comments, resulting in my being here today.

13 A formalized opt-out policy is of
14 heightened concern, as you've heard, for a number
15 of reasons related to health, security and public
16 safety. Since we don't know what Duke Energy is
17 considering for North Carolina's opt-out policy,
18 I look to other states for indications. In Ohio,
19 we know that Duke Energy had initially proposed a
20 fee a \$1073 to keep a smart meter off your house
21 and \$40 a month to have the monthly reading occur
22 by a Duke employee. Those fees are stunningly
23 burdensome and unjustifiable, as the Ohio
24 Utilities staff has stated.

1 Just as concerning, Ohio staff has
2 charged that Duke has misrepresented their
3 negotiations. Why should we expect opt-out
4 policy development in North Carolina to go any
5 better, especially given our Governor's history
6 with Duke and that he has very recently had
7 closed-door meetings with Duke officials. These
8 facts leave those of us who need to opt-out of
9 smart meter installation in a very vulnerable,
10 unprotected, victim-like position, and we need
11 your help to ensure fair treatment.

12 Duke Energy argues that the
13 established FCC standards protect the public and
14 that smart meter radio frequencies do not exceed
15 the FCC's allowable levels. Such statements are
16 incompatible with reality. As you have heard
17 through the EPA's 2002 letter and expert comments
18 in the docket, the FCC standards are inapplicable
19 because they are thermal standards and smart
20 meters emit non-thermal frequencies.

21 Some question whether people are
22 affected by radio frequencies such as those
23 emitted by smart meters. And, as you've heard,
24 the United States Access Board has weighed in on

1 that, recognizes electromagnetic hypersensitivity
2 as a disability and that line of thinking is
3 gaining traction in the courts as well.

4 Especially compelling is the case of Josh Hart, a
5 California resident who suffers from EHS and
6 whose electricity was cut off because he would
7 not pay his smart meter opt-out fee. Plumas
8 County Superior Judge Janet Hilde ruled that
9 opt-out fees violate state discrimination laws.
10 She ordered the utility company to cancel the
11 opt-out fee and monthly charge for reading the
12 analog meter, and the utility must allow Hart to
13 self-read the device.

14 Customer reading of meters is an
15 option that would work for Duke Energy. Other
16 methods are suggested in the docket, all of which
17 are entirely feasible and result in no additional
18 expenditures by customers or Duke Energy. There
19 is no need to charge a fee to avoid smart meters
20 or to read them.

21 If Duke Energy and the Utilities
22 Commission feel that these alternatives are not
23 viable, then they must clearly justify why they
24 are not feasible and they must provide an

1 analysis of the health costs and lost
2 productivity costs related to smart meter
3 installation.

4 There is nothing in Rule R8-60 and
5 R8-60.1 that suggests that Duke should only
6 consider its costs and benefits and ignore the
7 costs to its customers.

8 The November 23, 2015 Order
9 scheduling this public hearing supports the
10 requirement that Duke Energy consider adverse
11 health impacts related to smart meters in its
12 cost-benefit analysis. Per the November 23rd
13 Order, quote, *The Integrated Resource Planning*
14 *process is intended to identify those electric*
15 *resource options that can be obtained at least*
16 *cost to the ratepayers.* For Ratepayers who
17 are -- end of quote. For ratepayers who are made
18 ill by the installation of smart meters, the
19 health, economic and social costs are high and
20 smart meters are not a least-cost option.

21 Duke reports that in its
22 December 1, 2015 comments on smart meters that
23 they had to bypass 0.06 percent of the customers
24 within the projects' scope. That is 297 opt-outs

1 based on their data. Is it that critical that
2 Duke Energy be allowed to charge a fee for opting
3 out of smart meter installation when the reading
4 of old school meters, as you have heard, that 297
5 customers could read those old school meters. To
6 take it further, Duke's savings due to decreased
7 need for employees to read meters and decreased
8 vehicle costs will far exceed the cost of reading
9 297 meters. Duke reports in its redacted
10 cost-benefit analysis that it will save over
11 one-half million dollars annually and over
12 \$8 million over 15 years. Reading 297 meters
13 surely will not significantly eat into the over
14 one-half million dollars that Duke is saving
15 yearly. When considering the costs and benefits
16 to the public, clearly the portion of the public
17 that experiences electromagnetic hypersensitivity
18 experiences only losses and no benefits.

19 Duke is not guaranteed the right
20 to earn the highest profits possible and they
21 should not be allowed to sacrifice the health of
22 the most vulnerable for profits. Please do not
23 allow Duke Energy or other utility companies to
24 charge opt-out fees.

1 I have an additional point to make
2 on opt-out fees and I hope you will read it, as
3 well as my thoughts on Duke's woeful
4 underperformance in providing solar energy.

5 Thank you for your time and your
6 attention to this very important matter.

7 Q Let me ask you one or two questions, if I could.

8 A Please.

9 Q I think you -- I may have misunderstood or
10 mis-heard this, but I think you said that the
11 people that are harmfully affected by these smart
12 meters is something like 0.06 percent?

13 A No. One moment. Duke stated in its 2015
14 comments that they had to bypass 0.06 percent of
15 their customers.

16 Q So you're thinking that possibly there are more
17 that are --

18 A (Interposing) Out of --

19 Q -- not included in that?

20 A Yes, because the area that they are talking about
21 is where they have installed meters recently so
22 they have obviously not installed meters
23 throughout the state. They have a very large
24 customer database or customer base and so there

1 will be more people coming forward. But right
2 now, based on their figures of 0.06 bypass, that
3 equates to, of the meters they installed, 297
4 people.

5 Q Now, if I remember correctly, one of the previous
6 witnesses spoke of six to 15 percent of the
7 people being affected by this condition. Do you
8 think it's possibly that high?

9 A I do. And part of it is that people don't often
10 realize they're affected. I mean, I've been
11 hearing about electromagnetic frequencies for
12 years. I take very good care of my family. We
13 cook all of our food from scratch. We work out
14 and exercise. And we're doing pretty darn well
15 for being almost 50 years old, my husband and I.
16 And I couldn't solve, for example, why I couldn't
17 sleep and it had gone on for years. One o'clock,
18 I'd wake up every night at one o'clock, and
19 finally I turned off my wireless router and
20 doggone if I didn't sleep through the night, and
21 it was shocking. And my husband said *I wouldn't*
22 *have believed it if I hadn't seen it.* And so I
23 think there are a lot of people, like me, who
24 don't realize that they are being affected and it

1 takes a lot of time to figure it out.

2 Fortunately, I'm not affected as severely as some
3 of the folks you've heard today. For me, all I
4 can figure out is that it disrupts my sleep. But
5 there are many other people who are yet to
6 discover that there are problems. And, as you've
7 heard, it's a cumulative effect problem where
8 once exposure is reached then the effect and the
9 impact grows as time continues. So I think in
10 the future you will probably see even more
11 people.

12 MR. GILLAM: Thank you. No other questions.

13 COMMISSIONER BEATTY: Questions? Thank you
14 very much Ms. -- Oh, Commissioner Brown-Bland has a
15 question, Ms. Combs.

16 EXAMINATION

17 BY COMMISSIONER BROWN-BLAND:

18 Q Ms. Combs, is anyone else in your family affected
19 to your knowledge?

20 A No. No. And I tell you until this summer I
21 would have told you that I didn't really maybe
22 think that was a possibility. I was really
23 surprised to see it affected me so, no, it's just
24 me.

1 Q So you learned about that this summer?

2 A Yes.

3 Q About your situation?

4 A Yes, ma'am.

5 COMMISSIONER BROWN-BLAND: Thank you.

6 A Thank you. Thank you, again.

7 COMMISSIONER BEATTY: Thank you, ma'am.

8 (The witness is excused.)

9 MR. GILLAM: Tom Crockett.

10 **THOMAS CROCKETT;** was duly sworn and
11 testified as follows:

12 DIRECT EXAMINATION

13 BY MR. GILLAM:

14 Q State your name and address for the record,
15 please?

16 A My name is Thomas Crockett. I live at 4608
17 Interlachen Place in Raleigh.

18 Q You're here on your own behalf and not on behalf
19 of an organization?

20 A Right, as an individual.

21 Q Who is the utility that serves you?

22 A Duke Progress.

23 Q Now, you gave a paper to the Court Reporter, is
24 that just a paper --

1 A (Interposing) It's just a copy of the --

2 Q -- of your testimony or is it something more?

3 A Just a copy, same thing as this.

4 Q Please proceed with your statement.

5 A My name is Tom Crockett. I want to thank all of
6 the Commissioners for allowing me to speak. My
7 daughter is sensitive to things like Wi-Fi, cell
8 phones, computers and similar instruments. They
9 call it electrosensitivity. You've already heard
10 some about it tonight. So I'd like to confer
11 with that. She is right now too sick to come to
12 this hearing. She is not the most sensitive
13 person we know but even driving in a car under
14 high voltage power lines bothers her. She's had
15 this since she was 10-years old. When we were on
16 vacation, she'd be asleep in the back of the car
17 and she'd wake up when we went under high voltage
18 lines. That makes her sick. The first thing
19 that happens is that she gets what we call "brain
20 fog". She can't think clearly. Sometimes she
21 can't even find words to speak. It also causes
22 fatigue which can be severe.

23 I am an electrical engineer. You
24 could tell by my shirt pocket I suppose. I've

1 looked hard at trying to find the specific things
2 that worsen her condition and then I try to
3 remove those. We spend about a third of our
4 income on doctor bills. She is home from school
5 right now because she is too sick. There are
6 many things we do to fight the problem. For
7 example, we have completely shut off all of the
8 electricity on her side of the house. She uses
9 an old cell phone with a lower specific
10 absorption rate, the SAR rating. That's not the
11 best way to measure that, but that's all you got
12 when you go to cell phones. Even then she keeps
13 it far away from her except when she's actually
14 making a call.

15 On bad days, she gets sick if
16 there is any cell phone powered on in a car that
17 she's riding in. Even on good days, a GPS unit
18 in a car will make her sick. She's like any
19 other young woman in that she wants to be online
20 with her friends but she has to severely limit
21 that. She'll use my wife's computer for a few
22 minutes at a time and she stands behind the chair
23 with a wired keyboard on the back of the chair so
24 she's as far away as she can get from the monitor

1 and from the computer itself.

2 I have no doubt that smart meters
3 which have high frequency digital power and Wi-Fi
4 signals that would by, at best, a nuisance and,
5 at worst, a source of some of my daughter's
6 debilitation. There absolutely should be a
7 choice to opt-out. I also know there are other
8 people, some whose health is significantly worse
9 than my daughter, who are also too debilitated to
10 work and have no other source of income. So to
11 charge for the removal of something that causes
12 people to be sick is just not right.

13 I also -- that was about my
14 daughter. I also have a few comments about the
15 privacy issues. The power company is collecting
16 my private usage information with a smart meter
17 and what I think is an unconstitutional taking
18 without my knowledge much less my consent and
19 there should be constitutional protections that
20 guarantee they will not use my personal
21 information in ways I have not agreed to and that
22 can easily be well beyond their legitimate role
23 in delivering electricity. For example, is the
24 data encrypted so that it can't be easily stolen

1 by someone else? And, again, charging me to not
2 have a smart meter is like making me pay for them
3 not to violate my privacy. Okay.

4 Q Did you file a consumer statement of position
5 letter?

6 A I did not.

7 MR. GILLAM: No further questions.

8 COMMISSIONER BEATTY: Any other questions
9 for Mr. Crockett? Thank you very much, sir.

10 THE WITNESS: Thank you.

11 (The witness is excused.)

12 MR. GILLAM: Jacquie Ayala.

13 **JACQUIE AYALA;** was duly affirmed and
14 testified as follows:

15 DIRECT EXAMINATION

16 BY MR. GILLAM:

17 Q Would you state your name and address for the
18 record, please?

19 A My name is Jacquie Ayala, J-A-C-Q-U-I-E,
20 A-Y-A-L-A. I live at 320B South Boylan Avenue in
21 Raleigh, North Carolina.

22 Q Are you here speaking as an individual?

23 A I work with the North Carolina Sierra Club but I
24 offer these comments as an individual and a

1 concerned North Carolina resident.

2 Q And who is the electric utility that serves you?

3 A Duke Energy Progress.

4 Q Have you filed a consumer statement of position
5 letter in this case?

6 A I have not.

7 Q Please proceed with your statement.

8 A First, thank you, Chairman and the members of the
9 Commission, for the opportunity to speak tonight.
10 As you are well aware, the electricity market is
11 changing rapidly. The cost of solar and wind
12 power are plummeting; battery storage has arrived
13 in the market; and Energy Efficiency is already
14 the least-cost resource around. Utilities and
15 grid operators are increasingly comfortable
16 integrating renewables into the grid and planning
17 accordingly. Each year, the clean energy economy
18 is breaking records for installed generation and
19 job creation and will continue to do so for many
20 years to come. Meanwhile, the cost of burning
21 coal to ratepayers and to communities located
22 near dirty power plants continue to rise.

23 As this Commission considers
24 whether Duke Energy's long-range plans will

1 result in the least-cost generation and demand
2 reduction measures, I urge you to give careful
3 consideration to the cost of complying with new
4 state and federal environmental requirements. In
5 particular, what it will cost us to continue to
6 deal with the wastewater and coal ash that are
7 generated by power plants across our state as
8 coal plants continue to operate. For example,
9 the North Carolina Coal Ash Management Act
10 requires that coal plants switch to dirt -- to
11 dry handling of all coal ash by the end of 2019
12 or that they retire. The new federal water
13 toxics rule also requires dry ash handling and it
14 imposes new stringent limits on wastewater
15 discharges. By Duke's own estimates, the cost
16 associated with meeting these and other
17 requirements could total a billion dollars.

18 For a plant like Allen, the oldest
19 in Duke's North Carolina fleet, and which is
20 under court order to retire three of its five
21 units by 2024, a directive from the Commission
22 for Duke to evaluate whether it is more economic
23 to retrofit or to retire the plant would help the
24 Commission and other parties understand which

1 option is best for customers. Does it make sense
2 to invest millions of ratepayers' dollars to prop
3 up a plant that will be shattered in the near
4 future or would accelerating that retirement time
5 table present the best option for our
6 communities? I encourage the Commission to look
7 at an analysis for Allen and Duke's other coal
8 plants of the cost to consumers for capital
9 expenditures to extend the life of these coal
10 plants in comparison to retiring the plants,
11 doing so would give the public more opportunity
12 to engage in the decision making and could
13 provide a more complete picture of the options to
14 generate electricity.

15 Relying on coal-fired electricity
16 pollutes our air, water and climate and the
17 communities that live near the power plants. For
18 the sake of my generation and those that come
19 after, we must take concrete steps to curb the
20 worst effects of climate change and that starts
21 here. Thank you, again, Chairman and the members
22 of the Commission, for listening to my comments.

23 MR. GILLAM: Thank you. No questions.

24 COMMISSIONER BEATTY: Any questions for

1 Ms. Ayala? Thank you very much, ma'am.

2 THE WITNESS: Thank you.

3 (The witness is excused.)

4 MR. GILLAM: Ellen Whitaker.

5 **ELLEN WHITAKER;** was duly sworn and

6 testified as follows:

7 DIRECT EXAMINATION

8 BY MR. GILLAM:

9 Q State your name and address for the record,
10 please.

11 A My name is Ellen Whitaker and my address is 713
12 Arnette Avenue in Durham, North Carolina.

13 Q Are you here on behalf of yourself only or also
14 on behalf of a group?

15 A Just myself.

16 Q Who is the utility that provides electricity to
17 you?

18 A Duke Energy. I'm in Durham, if that means it's
19 Carolina, I'm not sure.

20 Q Have you filed a consumer statement of position
21 letter?

22 A Yes, just a couple of phrases I sent.

23 Q Please proceed with your statement.

24 A I suffer from electromagnetic hypersensitivity

1 and it's actually quite difficult for me to be in
2 this room right now but it's really important for
3 me to be here. I am a classical guitar teacher
4 and I teach out of my home and the smart meter is
5 on a wall very close -- was on a wall very close
6 to where I work. And I had to battle with Duke
7 Energy for several months to get it removed and
8 they final replaced it with a telephone line read
9 meter and they're charging me \$45 a month for
10 that so that I am not bombarded by the wireless
11 which makes me really ill. I had to quit
12 teaching at Voyager Academy because of the
13 wireless there. My life is nothing like it was
14 before. And I really feel that it's unfair to
15 charge someone to not bombard them with something
16 that makes them sick. I had more to say but
17 can't. I'm having a hard time thinking straight
18 right now.

19 Q Would you like for us to give you extra time or
20 are you finished?

21 A Let me just think for a moment. I think I've
22 said enough. That's all I have to say. Thank
23 you.

24 MR. GILLAM: No questions.

1 COMMISSIONER BEATTY: Any questions? Thank
2 you, ma'am.

3 (The witness is excused.)

4 MR. GILLAM: Robin Sale (sic).

5 **ROBIN SOLE;** was duly sworn and
6 testified as follows:

7 DIRECT EXAMINATION

8 BY MR. GILLAM:

9 Q Would you state your name and address for the
10 record, please?

11 A Yes. Robin Sole, 5809 Cameo Glass Way, Raleigh,
12 North Carolina 27612.

13 Q Are you here speaking individually?

14 A Individually.

15 Q Who is the utility that provides service to you?

16 A Duke Progress.

17 Q Have you filed a consumer statement of position
18 letter?

19 A No, I have not.

20 Q Please proceed with your statement.

21 A Okay. I suffer from electrical sensitivity, like
22 some of the other folks who have spoken already,
23 and I, too, would consider myself too sick to be
24 here. But I'm here not only for myself so that

1 you can hear my personal testimony but for
2 Crystal, Joan, Shannon, Marie and many other
3 people who are like me who are struggling with
4 the same condition. I'm going to take you
5 through my journey so that you can kind of
6 understand how this all came about for me.

7 In May of 2012, I got bit by a
8 tick and my life changed completely. Before
9 that, I was fine. I was healthy. I could walk
10 10 miles a day. I could work without any
11 problems. So I did not get the usual symptoms
12 that people get when they develop Lyme Disease so
13 I didn't treat it. I didn't go to the doctor.
14 Within two months my neurological meltdown began,
15 that was in the summer. By the end of the summer
16 in 2012, I was pretty much having heart attack
17 symptoms from six to eight hours every day.

18 I left Raleigh and I went to
19 Charlotte and I got on an antibiotic, again, not
20 knowing that I had Lyme Disease. I was on an
21 antibiotic for a cephapirin infection and most of
22 my neurological symptoms resolved. When I came
23 back to Raleigh and I got off the antibiotic,
24 everything kicked up into high gear again and I

1 got with a neurologist and she said you have
2 Multiple Sclerosis and she put me on an MS drug.
3 I proceeded to have full-body seizures, tremors,
4 severe tachycardia and heart attack symptoms and
5 I lost the hearing in my right ear. I could
6 barely walk by the end of the year. I couldn't
7 use -- I could barely use this arm. I had vision
8 loss and hearing loss because of the drugs.

9 I started to say this isn't
10 working and I had to figure it out for myself and
11 I sat and I read, and I read, and I read. I
12 started reading that people with MS reacted
13 negatively to smart meters. Again, still did not
14 know I had Lyme Disease at this time. I was more
15 focused on the fact that I had 11 amalgams in my
16 mouth and that mercury toxicity could look like
17 MS and I needed to get them out and I needed to
18 start detoxing my metal for my body. So, as I'm
19 reading about the smart meter and how it affects
20 people with MS, I still didn't really believe it.
21 I was very surprised.

22 I work in IT. That's my career is
23 working with this kind of technology and I was
24 resistant to changing. I liked my computer. I

1 liked my Wi-Fi. I lived in front of it in order
2 to research and get answers for what was going on
3 with my body.

4 Along that journey, I started
5 using devices that people said could help me,
6 protect me from the Wi-Fi. And what was very
7 interesting is that it was a little silver device
8 that I would put in my pocket and all of a sudden
9 that spot on my body would have severe spasticity
10 because I had spasticity just about everywhere,
11 and I would take it off and put it down and it
12 would stop, and then I would put it back in my
13 back pocket and everything would go crazy again.
14 And I'd go, *This is drawing it to me. It's not*
15 *keeping it from me. I'm not using this anymore.*
16 So I started believing it. I started believing
17 that this was really real. I was extremely
18 suicidal at this point because my body -- at
19 night, I could not sleep in my bedroom at all.

20 And then somewhere in this journey
21 I met Andrew McAfee and thank God for him because
22 he said, *let me come in, let me measure in your*
23 *house and let me see if it's because of the*
24 *electrical pollution in your home.* And I said,

1 yes, please. He came in, he measured everything,
2 he said, *no wonder you're going crazy*. He goes,
3 the frequency in this room, which was getting hit
4 by the Wi-Fi in the next room, was so bad that I
5 couldn't even think. So we moved the router. We
6 put in measures to quiet down the smart meter and
7 then I got wood planks to separate my box spring
8 from my mattress. In that process, I had only
9 put in -- I was trying to figure out the right
10 depth and measure that was necessary -- I only
11 put in half of the wood planks so half of the
12 mattress was not on it. When I laid in the bed
13 that night, my toes, which was the part that was
14 not with the wood planks, would tingle and I
15 could immediately feel the difference. The next
16 day I got the rest of the wood planks on the bed.
17 That night I could sleep without drugs to put me
18 to sleep. It was a miracle. I was able to
19 finally be able to sleep again and start to heal
20 my body.

21 I think this is really important
22 because now how do I go back to work with this
23 electrical sensitivity if I work in IT. I mean,
24 this issue I think is more bigger than the smart

1 meters and opting in or opting out. I think it's
2 about the technology. And the technology is not
3 resonating at the right frequency for us as human
4 beings. And I think they really need to rethink
5 this whole thing entirely. That's all. Thank
6 you.

7 COMMISSIONER BEATTY: Questions for
8 Ms. Sole? Thank you very much, ma'am. We appreciate
9 you coming out this evening.

10 THE WITNESS: Thank you.

11 (The witness is excused.).

12 MR. GILLAM: There is not anybody else who
13 has signed up and said they wish to testify. There
14 are five people that signed up but said they don't
15 wish to testify. Unless one of them now wants to
16 testify, I don't think we have anyone else.

17 COMMISSIONER BEATTY: Is there anyone else
18 in the hearing room this evening who wishes to
19 testify?

20 (No response.)

21 The record will reflect that no one
22 responded.

23 Ladies and gentlemen, that will conclude our
24 hearing. We thank you all for coming out. We

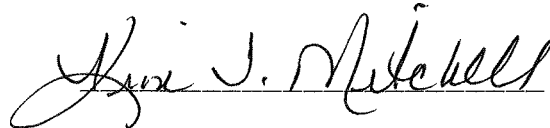
1 appreciate you taking the time and, in some cases,
2 risking your health apparently to come out and give us
3 your input.

4 If there's nothing further from any of the
5 parties, we will be adjourned.

6 (WHEREUPON, the proceedings adjourned at 8:27 p.m.)
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C E R T I F I C A T E

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



Kim T. Mitchell
Court Reporter II