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DATE: March 15, 2011

DOCKET NO.: E-7, Sub 819

TIME IN SESSION: 9:00 A.M. TO 1:10 P.M.

BEFORE: Chairman Edward S. Finley, Jr., Presiding
Commissioner Lucy T. Allen
Commissioner Bryan E. Beatty
Commissioner ToNola D. Brown-Bland
Commissioner William T. Culpepper, III
Commissioner Lorenzo L. Joyner

IN THE MATTER OF:

Duke Energy Carolinas, LLC Application for
Approval of Decision to Incur Nuclear Generation
Project Development Costs.

VOLUME 1

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P R O C E E D I N G S

CHAIRMAN FINLEY: My name is Edward Finley, and with me this morning are Commissioners Lorinzo L. Joyner, William T. Culpepper, III, Bryan E. Beatty, ToNola D. Brown-Bland and Lucy T. Allen. I now call for hearing Docket Number E-7, Sub 819, In the Matter of the Application of Duke Energy Carolinas, LLC for Approval of Decision to Incur Nuclear Generation Project Development Costs.

On November 15th, 2010, Duke filed its Amended Application for Approval of Decision to Incur Nuclear Generation Costs, along with its direct testimony and exhibits.

On November 29, 2010, the Commission issued its Order Scheduling Hearing and Requiring Prefiled Testimony.

On December 6th, 2010, Duke filed its Revised Amended Application for Approval of Decision to Incur Nuclear Generation Project Costs.

On February 1, 2011, Duke filed its Report of Nuclear Development Activities and Expenditures.

On February 7, 2011, Duke filed its supplemental testimony of James E. Rogers.

1 On February 9, 2011, the Public Staff
2 filed a Motion for an Extension of Time for the
3 Filing of Testimony and Rebuttal Testimony which
4 was granted by Commission Order issued February 11,
5 2011.

6 On February 18, 2011, NCWARN filed a
7 Motion for an Additional Extension of Time for the
8 Filing of Testimony and Rebuttal Testimony which
9 was granted by Commission Order issued February 21,
10 2011.

11 On February 24, 2011, the Public Staff
12 filed its joint testimony and exhibits.

13 On February 28, 2011, the Public Advocacy
14 Groups filed their joint testimony and exhibits.

15 On March 8th, 2011, the Public Advocacy
16 Groups filed a Motion to Allow Time Certain for
17 Witness Bradford. Duke filed its objection on
18 March 9, 2011.

19 On March 10, 2011, the Commission issued
20 its Order Allowing Date Certain for Witness
21 Bradford to testify.

22 On March 11, 2011, Duke filed its
23 rebuttal testimony.

24 Interventions of parties have been filed

1 and granted for Carolina Utility Customers
2 Association, Inc., Progress Energy Carolinas, Inc.,
3 The Carolina Industrial Group for Fair Utility
4 Rates III, Wells Eddleman and Public Advocacy
5 Groups. This brings us up to the hearing today.

6 In compliance with the requirements of
7 the State Ethics Act, I remind all members of the
8 Commission of their duty to avoid conflicts of
9 interest and inquire whether any member of the
10 Commission has a known conflict of interest with
11 respect to any of the matters coming before us this
12 morning?

13 (No response.)

14 CHAIRMAN FINLEY: It appears that there
15 are no conflicts, so we will proceed, and I call on
16 the parties to announce their appearances,
17 beginning with the applicant.

18 MR. KAYLOR: Thank you, Mr. Chairman,
19 members of the Commission. Robert Kaylor appearing
20 on behalf of Duke Energy Carolinas.

21 MS. SHAFEEK-HORTON: Timika Shafeek-
22 Horton on behalf of Duke Energy Carolinas.

23 MR. CASTLE: Good morning. Alex Castle
24 on behalf of Duke Energy Carolinas.

1 MS. RANKIN: I'm Gisele Rankin, a staff
2 attorney with the Public Staff representing the
3 Using and Consuming Public.

4 MR. GREEN: Mr. Chairman, members of the
5 Commission, I'm Len Green with the Attorney
6 General's Office appearing on behalf of Consumers,
7 and also appearing for the Attorney General's
8 Office will be Margaret Force.

9 MR. RUNKLE: Mr. Chairman, members of the
10 Commission, my name is John Runkle, representing
11 the Public Advocacy Groups. Those are NC Waste
12 Awareness and Reduction Network, The Public
13 Citizen, North Carolina Public Interest Research
14 Group, The Nuclear Information and Resource
15 Service, Common Sense at the Nuclear Crossroads,
16 Clean Water for North Carolina and the Blue Ridge
17 Environmental Defense League.

18 Sir, at this time, a preliminary matter,
19 the Clean Water for North Carolina would like to
20 withdraw their Petition for Intervention. Their
21 Executive Director said that she might want to be
22 here to give public comments.

23 CHAIRMAN FINLEY: Thank you, Mr. Runkle.
24 We will allow that withdrawal.

1 MR. RUNKLE: Thank you.

2 CHAIRMAN FINLEY: Ladies and gentlemen,
3 let me tell you a little bit about the procedure
4 that we're going to follow today. We have a number
5 of expert witnesses who have prefiled testimony in
6 this docket. Some of them are from out of town. I
7 indicated in the opening statement that the witness
8 for the North Carolina Advocacy Groups, Mr.
9 Bradford, has a pressing engagement tomorrow. He
10 will be unable to testify tomorrow. We're going to
11 try to accommodate him and put him on first.

12 A number of you have written the
13 Commission and have indicated your interest in
14 making comments, public comments, about this case.
15 I understand from the Public Staff that nine or 10
16 people in the hearing room this morning have signed
17 up, expressing their interest to testify. We're
18 going to take one hour at the beginning of the
19 hearing to hear from public witnesses, and then
20 we've got to move to these other expert witnesses
21 because we've got to get them on and out so that
22 they can meet their prior commitments. So what
23 that means is we're going to have to be brief and
24 to the point.

1 I have asked Mr. Runkle of the Public
2 Advocacy Groups and the Public Staff to try to
3 manage the best use of this public testimony, to
4 manage it as best we can. So if you could be brief
5 and you could avoid repetition, if you want to have
6 spokesmen for various positions, that's fine with
7 me, but if one witness gets up and takes a lot of
8 time, that just means that there's going to be an
9 impediment to the full expression of opinion by
10 others. So we would ask you to conserve your time
11 and make use of it as best we can. I understand
12 that there are a number of you who are from out of
13 town who have traveled a long distance, and we'd
14 hate for you to come here and expect to testify and
15 be unable to testify because someone in front of
16 you has taken up all the time.

17 So with that instruction, Ms. Rankin, we
18 will -- first of all, let me ask if there are any
19 other preliminary matters that we need to address
20 from counsel before we start?

21 (No response.)

22 CHAIRMAN FINLEY: It appears nothing to
23 do of that nature, so Ms. Rankin, we'll let you
24 call your first witness.

1 MS. RANKIN: Bill Kinsella.

2 UNKNOWN: He will be back within a couple
3 of minutes. Someone can go before him.

4 MS. RANKIN: Ellie Kinnaird. Have a
5 seat, and the Chairman will swear you in.

6 (WHEREUPON, ELEANOR KINNAIRD WAS CALLED AS A
7 WITNESS, DULY AFFIRMED, AND TESTIFIED AS FOLLOWS:)

8 MS. KINNAIRD: Thank you, Mr. Chair and
9 members of the Commission. My name is Eleanor
10 Kinnaird. I represent Orange and Person Counties
11 in the North Carolina Legislature. I appreciate
12 very much this opportunity to speak to you on this
13 issue which I feel is not a reasonable and prudent
14 request of the power -- of Duke Power -- Duke
15 Energy, and I have several reasons, and I ask you
16 to deny that request.

17 First of all, I want to speak about
18 history. We have had many, many cost overruns in
19 our own state's history of nuclear power plants.
20 We also -- I also received a letter from a Florida
21 Republican legislator who voted for the
22 construction bond process -- progress in Florida
23 and has since greatly regretted it. They said it
24 has greatly burdened their ratepayers. One of the

1 problems with charging ratepayers right now for
2 future construction is that the ratepayers right
3 now pay, but may never receive those benefits.
4 They may move away, they may die, they may decide
5 that this is not the state they want to live in,
6 and so they never actually receive the benefit.

7 Finally, I don't believe we need this
8 extra capacity. I'm on the Energy Policy
9 Commission, and I know that there are other ways we
10 can go. Energy efficiency -- we can save up to 40
11 percent of energy use through energy efficiency.
12 I'm going to give you an example. In China, 250
13 million people have solar on their roof. We have
14 not committed in this country. Senate Bill 3
15 certainly has been a beginning, but we need much
16 more in the way of energy efficiency and
17 alternative energy. Distributed small energy is
18 much, much better than one large capacity plant.
19 We also saw last year the Building Code Commission
20 put in place 15 percent for residential homes
21 energy efficiency and 30 percent in commercial. We
22 hope that that will go into effect and we will see
23 a great need reduced for capacity.

24 And finally, of course, we have the very

1 sad example today of what happened in Japan. Thank
2 you very much.

3 CHAIRMAN FINLEY: Thank you. Are there
4 questions for the Senator?

5 (No response.)

6 CHAIRMAN FINLEY: Thank you for coming.
7 We appreciate your input.

8 MS. RANKIN: Bill Kinsella.

9 UNKNOWN: He isn't back yet.

10 MS. RANKIN: Okay. Richard Fireman.

11 (WHEREUPON, RICHARD FIREMAN WAS CALLED AS A
12 WITNESS, DULY SWORN, AND TESTIFIED AS FOLLOWS:)

13 MS. RANKIN: Please state your name and
14 your affiliation for the record.

15 DR. FIREMAN: My name is Richard Fireman.
16 I'm the Public Policy Coordinator for North
17 Carolina Interfaith Power & Light. It's a program
18 of the North Carolina Council of Churches.

19 MS. RANKIN: Please make your statement.

20 DR. FIREMAN: Commissioners, members of
21 the Public Staff, thanks for letting me testify
22 today. A little bit about IPO, we're a state
23 organization, a program of the Council of Churches.
24 We work with faith communities all across the state

1 to address the causes and consequences of global
2 climate change through education, public policy and
3 outreach. We're a program of the Council of
4 Churches. The Council is comprised of 27 distinct
5 judicatories from 18 denominations across the
6 state. Our members have over 6,200 congregations
7 with about 1-1/2 million members. IPL is
8 interfaith, and we have members from the Jewish,
9 the Muslim, the Unitarian, the Friends, Buddhist,
10 Sikh and Hindu individuals and congregations.

11 We have testified before this Commission
12 many times, and each time our testimony becomes
13 more critical, as society continues to miss the
14 opportunities to deal effectively with our energy
15 crisis. I'm a retired medical doctor, and I left
16 medical practice to devote my energies to the work
17 of IPL because I realize the health of our human
18 communities and ecosystems are at critical tipping
19 points. Like a patient in an ICU, the stability of
20 life on our planet depends on rapid and correct
21 decisions, and none is more important than the
22 decision before you today, whether or not it's
23 prudent or reasonable for citizens of North
24 Carolina to finance Duke Energy's proposed new

1 nuclear power plants.

2 IPL has submitted several documents
3 today, including a resolution by the Council of
4 Churches and the letter that we sent to the
5 governor and all the state legislators opposing the
6 legislation as being circulated at the Public Staff
7 here and through the legislators to try to get an
8 expansion of CWIP without Utilities Commission
9 review. We're opposing that.

10 I'm also including three studies that
11 show that energy efficiency is the best choice, and
12 they demonstrate that we can easily achieve 25
13 percent electricity energy demand reduction in the
14 same time frame that it would take to build nuclear
15 plants in this state.

16 As you know, energy efficiency is the
17 cheapest way to provide electricity at about one-
18 quarter of the cost of conventional power
19 generation. The benefits to society in terms of
20 jobs and health and safety, especially safety, as
21 we are listening to the news daily, as compared to
22 conventional power generation, are well documented,
23 and a robust energy efficiency program would
24 obviate the need for any new nuclear power plants

1 and would also allow Duke to retire their coal-
2 fired plants in a more timely fashion, relieving
3 the citizens of the state the heavy financial and
4 public burden of paying the health and
5 environmental so-called externalized cost of coal.

6 It is clear to us at the Council of
7 Churches and IPL that our energy system and planet
8 are critical, and we need the Utilities Commission
9 to recognize that the economic choice, the moral
10 choice and the choice for the health of our
11 citizens and ecosystems are all in alignment.

12 It is very interesting to us that the
13 Commission is charged with finding or not it's
14 reasonable and prudent to grant Duke Energy another
15 \$287 million for the new -- excuse me -- for the
16 Lee nuclear power plant. Prudence is considered
17 one of the four cardinal virtues in Christian
18 theology, for it is believed that no other virtue,
19 including justice, could be sustained in the face
20 of the inability to control oneself. Giving Duke
21 \$287 million of ratepayer money fails the test of
22 all common sense meanings of the word prudence.
23 It's neither practical, nor careful in providing
24 for the future. IPL believes that granting such

1 funding would be not only a failure of good
2 judgment, but it would also constitute a failure of
3 our moral imagination.

4 As the health and welfare of the least
5 among us is a calling from our faith traditions, we
6 believe this is fundamentally a moral choice. The
7 biblical prophets roundly condemn any society in
8 which a few wallow in luxury while many others are
9 ruined in poverty. The average citizen in North
10 Carolina is struggling financially. Our economy is
11 faltering, with high unemployment and
12 underemployment, and many breadwinners are finding
13 it difficult, if not impossible, to provide basic
14 needs for their families. Under these
15 circumstances, it's morally unacceptable to allow
16 Duke Energy, a wealthy Fortune 500 corporation, to
17 require ordinary citizens to assume the financial
18 risks of an expensive nuclear plant, when
19 stockholders and bankers refuse those risks.

20 Both prudence and justice demand that we
21 must be able to control our spending. Allocating
22 tens of billions on risky nuclear finances is
23 neither reasonable, nor prudent, nor fair. The
24 average citizen of North Carolina, and especially

1 the poor, the elderly and others on fixed incomes,
2 and the under and unemployed cannot afford to be
3 imprudent with their dollars, while the wealthy
4 shareholders wait for profits to accrue, if and
5 when these power plants are completed.

6 At this critical moment in our collective
7 decision making process, the only reasonable and
8 prudent and just choice is for the Commission to
9 refuse Duke's request for \$287 million right now
10 and to ensure that any dollars are spent on energy
11 efficiency in order to retire the old coal-fired
12 power plants and to build a new renewable energy
13 system.

14 Thank you very much.

15 CHAIRMAN FINLEY: Thank you, Dr. Fireman.
16 Are there questions of Dr. Fireman?

17 (No response.)

18 CHAIRMAN FINLEY: All right. We will
19 mark for identification the submissions that Dr.
20 Fireman has presented as Fireman Exhibit Number 1.
21 And at the appropriate time, if counsel will take a
22 look at those and see if there are any objections.
23 So we'll mark that as Fireman Exhibit Number 1.

24 (FIREMAN EXHIBIT NUMBER 1 WAS

1 MARKED FOR IDENTIFICATION.)

2 CHAIRMAN FINLEY: Ms. Rankin?

3 MS. RANKIN: Avram Friedman.

4 (WHEREUPON, AVRAM FRIEDMAN WAS CALLED AS A WITNESS,
5 DULY SWORN, AND TESTIFIED AS FOLLOWS:)

6 MS. RANKIN: Please state your name and
7 your affiliation for the record.

8 MR. FRIEDMAN: My name is Avram Friedman.
9 I'm the Executive Director of the Canary Coalition.

10 MS. RANKIN: Please proceed with your
11 statement.

12 MR. FRIEDMAN: Thank you, Commissioners,
13 for allowing this period of public comment.

14 Today you're holding an evidentiary
15 hearing on Duke Energy's request for a rate
16 increase to pay for the planning of a new nuclear
17 power plant to be located less than fifty miles
18 upwind of the most populated metropolitan area in
19 North Carolina. I don't envy you for the
20 responsibility you hold in your hands today,
21 because should this plant be built and if one day
22 some unforeseen natural catastrophe or act of
23 terrorism causes something terrible to go wrong,
24 you will remember that it was your decision that

1 enabled this to happen, and that will be a terrible
2 thing to live with.

3 This expense, without choice to unwilling
4 ratepayers, is unjust and unnecessary, as is the
5 construction of another nuclear power plant. A
6 rate hike at this time will harm residents,
7 businesses and industries that are struggling to
8 stay afloat. This request by Duke Energy is a job
9 killer that could push some people and businesses
10 over the economic edge. On the website of the
11 North Carolina Utilities Commission, it states that
12 your mission includes promoting least cost energy
13 planning, providing just and reasonable rates and
14 charges for public utility services, and to promote
15 conservation of energy. This rate increase and
16 this new power plant would serve none of these
17 purposes.

18 There is, however, another option
19 immediately available to you that would serve your
20 mission much more appropriately. House Bill 135, a
21 live, white hot piece of legislation introduced in
22 this session of the North Carolina General
23 Assembly, instructs the Utilities Commission to
24 design a system of inverted electric utility rates

1 that will dramatically reduce energy consumption in
2 our state, as has already been done in seven other
3 states, rendering the construction of new power
4 plants a moot point. It will provide all
5 ratepayers with a means to reduce their monthly
6 energy costs as they reduce their energy usage.
7 This bill is gathering steam in the House, and we
8 have learned that a companion bill will be
9 introduced in the Senate. No doubt the current
10 events in Japan are adding to the urgency that is
11 propelling a groundswell for this legislation, but
12 the irony is that the Utilities Commission already
13 has the power to implement a system of inverted
14 rates without this legislation. In 2008, you
15 conducted a process that examined the benefits of
16 utility rate restructuring. Isn't it time to
17 revisit the information you collected during that
18 process and begin implementing comprehensive rate
19 restructuring with the purpose of driving efforts
20 in conservation and investment in energy efficiency
21 on a massive scale? We'll gather the public
22 support and storm the Bastille to get H135 passed,
23 if we have to, but we'd rather just see you do your
24 job without having to force your hand.

1 Please take this under serious
2 consideration. Thank you.

3 CHAIRMAN FINLEY: Thank you, Mr.
4 Friedman. Are there questions of Mr. Friedman?
5 (No response.)

6 CHAIRMAN FINLEY: Thank you for coming
7 down from Sylva. Okay.

8 MS. RANKIN: Lewis Patrie.

9 DR. PATRIE: I'm Dr. Lou Patrie.

10 CHAIRMAN FINLEY: Let me get you sworn
11 first, and then we'll do the formality.

12 (WHEREUPON, LEWIS PATRIE WAS CALLED AS A WITNESS,
13 DULY AFFIRMED, AND TESTIFIED AS FOLLOWS:)

14 MS. RANKIN: Please state your name and
15 your affiliation.

16 DR. PATRIE: I'm Dr. Lewis Patrie,
17 representing Western North Carolina Physicians for
18 Social Responsibility, whose concern is for a safe
19 environment and elimination of nuclear dangers.
20 Shall I go ahead?

21 MS. RANKIN: Yes.

22 DR. PATRIE: Dealing with unanticipated
23 crises represents one caution when considering
24 whether to assess ratepayers in this manner.

1 Despite public relations promotion of a nuclear
2 renaissance, there is considerable doubt as to
3 whether proposed nuclear reactors will ever be
4 built. Historically, when many plants were
5 proposed decades ago, only half of them became
6 reality in the wake of Three Mile Island in '79 and
7 Chernobyl in '86. New uncertainties follow the new
8 acknowledged vulnerability of reactors in Japan due
9 to massive seismic events and being informed that
10 there are six reactors in crisis at three different
11 sites. One or more meltdowns would not only be a
12 Japanese disaster, but would impact the entire
13 Northern Hemisphere. We have to be aware that
14 radioactive material is used in a nuclear plant as
15 a heat source, just to boil water for operating
16 turbines to generate electricity. Huge amounts of
17 radioactive material are made to go through a chain
18 reaction, a process in which atomic particles
19 bombard nuclei, causing them to break up again and
20 generate heat. But to keep the nuclear reaction in
21 check to prevent meltdowns, vast amounts of water
22 are required. In the case of Duke's proposed
23 reactors, extra water storage of Broad River's
24 supply has been added to the plan. As with all

1 nuclear reactors, backup generators are provided to
2 deal with emergencies such as electrical power
3 failure. In Japan's recent crisis, simultaneous
4 unanticipated multiple failures created the
5 inability to control the fissile reactors' nuclear
6 chain reactions.

7 Although the United States has been
8 spared the worst of such scenarios by the narrowest
9 of margins, here are examples of near meltdowns in
10 the U.S. In 2002, Davis-Besse in Ohio barely
11 avoided a disaster when it was discovered that
12 boric acid had eaten a football-size hole in the
13 reactor vessel's wall, leaving only an eighth of an
14 inch protecting that area from disaster.
15 Subsequently, a similar finding averted a serious
16 accident in Oconee reactor in South Carolina. And
17 in 1966, the Fermi reactor in Detroit experienced a
18 partial fuel meltdown, barely preventing a
19 Chernobyl-like disaster in that urban setting.

20 Nuclear experiences over the decades are
21 in conflict with the assertion that no deaths have
22 resulted from nuclear power. Nuclear industry's
23 messages reassuring the public of safety and that
24 no deaths have occurred as a result of nuke power

1 are not verifiable. There are many reports from
2 around the world documenting that children living
3 near nuclear power plants experienced elevated
4 death rates from birth defects, cancer and
5 premature deaths. A study of medical records found
6 that infant death rates near five nuclear plants
7 increased within two years after the plants opened.
8 The study also found that infant deaths decreased
9 15 to 20 percent soon after the reactors closed,
10 and the decreases extended on for a period of seven
11 years after the plants closed. I give a reference
12 citing that.

13 The National Academy of Science's
14 Committee on the Analysis of Cancer Risks in
15 Populations Near Nuclear Facilities has begun
16 studying the issue. The results of such a study
17 should be regarded cautiously, as one of its
18 members has already suggested that the findings
19 will exonerate nuclear power, which bears out
20 thinking about because in the past, some of the
21 statements by people who promote nuclear power have
22 been found incredible.

23 Following the '86 disaster in Chernobyl,
24 that event affected the entire Northern Hemisphere.

1 Last year documented in a book, "And Chernobyl:
2 Consequences of the Catastrophe for People and the
3 Environment," published by the New York Academy of
4 Sciences, it was found that medical records between
5 1986, the year of the accident, and 2004 reflect
6 985,000 deaths as a result of the radioactivity
7 released from Chernobyl. Most of the deaths were
8 in Russia, Belarus and Ukraine, but others were
9 spread throughout many other countries where
10 radiation from Chernobyl struck.

11 It is inappropriate to require that
12 ratepayers invest in what Wall Street refuses to
13 support. It's time to invest in massive
14 conservation efforts and truly clean, renewable
15 energy, not risky and dangerous nuclear power,
16 which is inherently the most dangerous, as well as
17 the most expensive method of providing energy.

18 Nuclear power plants are, in fact, life-
19 threatening wherever they are. They represent the
20 most dangerous way to boil water ever devised.
21 Conservation measures, revising rate structures
22 that favor those who conserve our energy resources,
23 wind, solar and geothermal energy, and other forms
24 of safe, clean power are far preferable and would

1 not risk the massive deadly damage because of
2 earthquake or terrorism. Building nuclear power
3 plants are contraindicated when more benign
4 alternatives are available and economically
5 competitive. Thank you.

6 CHAIRMAN FINLEY: Yes. Are there
7 questions?

8 (No response.)

9 CHAIRMAN FINLEY: Thank you for coming.

10 MS. RANKIN: Bill Kinsella.

11 DR. KINSELLA: I have eight copies of my
12 testimony here. Can we give them to the
13 commissioners?

14 CHAIRMAN FINLEY: Have a seat, Mr.
15 Kinsella. I'll swear you in.

16 (WHEREUPON, WILLIAM KINSELLA WAS CALLED AS A
17 WITNESS, DULY SWORN, AND TESTIFIED AS FOLLOWS:)

18 DR. KINSELLA: I have my original here
19 for the clerk. Thank you. Mr. Chairman and
20 Commissioners, thank you so much for being
21 available to hear my concerns today.

22 As a North Carolina citizen and an
23 electric utilities ratepayer, I'm deeply concerned
24 about efforts by Duke Energy and Progress Energy to

1 construct new reactors in North Carolina and South
2 Carolina, and to shift the risks and costs
3 associated with such a project to ratepayers. I'm
4 writing and I'm speaking here today to urge you to
5 deny any such effort in the near future and beyond.
6 Below, I'll explain why I believe new reactor
7 construction and shifting the costs and risks of
8 that construction to North Carolina ratepayers and
9 taxpayers is neither reasonable nor prudent.

10 Although I don't claim to be a technical
11 expert, I am substantially familiar with the issues
12 at stake. As an academic social science
13 researcher, publishing in the field of energy
14 controversies, I have closely followed public
15 debates and policy debates surrounding nuclear
16 energy issues since 1993. In the spring of 2010, I
17 had the opportunity to spend four months in
18 Germany, where they have just postponed the
19 lifetime extensions for their reactors, as a U.S.
20 Fulbright Scholar, to initiate a comparative study
21 of nuclear energy in the U.S., Germany, and
22 globally. In August I visited Japan and toured the
23 nuclear fuel reprocessing facility at Rokkasho, at
24 the northwestern tip of Honshu Island. My railway

1 trip to Rokkasho took me past the region that has
2 now been so devastated by the recent earthquake and
3 tsunami, and is now experiencing the aftermath of
4 multiple nuclear failures.

5 In December 2010 I was one of 16 invited
6 speakers at a workshop on "Nuclear Future," hosted
7 by the University of California at Berkeley, and I
8 cite here the website where you can look at the
9 details of that conference. Two of the other
10 speakers are members of President Obama's blue
11 ribbon panel on the future of nuclear energy, and a
12 third is a former commissioner of the Nuclear
13 Regulatory Commission. Although the list of
14 presenters leaned strongly toward nuclear industry
15 insiders and others closely associated with the
16 industry, the workshop's presentations and
17 discussions further convinced me of the following
18 points:

19 Point 1: As acknowledged by a number of
20 the presenters and as evident in the public record,
21 nuclear energy projects are not economically viable
22 without massive government support in the form of
23 subsidies, loan guarantees, production tax credits
24 and the like.

1 Point Number 2: As one presenter put it,
2 decisions regarding whether to build new nuclear
3 plants will not be made on the basis of economic
4 viability, but instead, on the basis of
5 profitability. As I understand the difference
6 between those principles, it's the financial
7 support enabled by government policies that shift
8 costs and risks to ratepayers and taxpayers.

9 Point Number 3: The points above are
10 further supported by the fact that despite massive
11 loan guarantee offers by the Obama administration,
12 and previous support through the 2005 Energy Policy
13 Act, only one nuclear reactor project has been
14 undertaken and its outcome is very uncertain. It
15 sits on a fault line as well. In the U.S. and in
16 most other countries, there is no "Nuclear
17 Renaissance," and it's uncertain that there will be
18 one anywhere.

19 Point Number 4: If North Carolina's
20 citizens and ratepayers are forced to bear the up-
21 front costs of new nuclear projects in our state
22 and neighboring states, they may well be paying for
23 projects that never come to fruition. Amplifying
24 that outcome further, taxpayers across the U.S. may

1 also bear the costs of honoring federal loan
2 guarantees for failed projects. And if these
3 projects do manage to succeed, that will be an
4 artificial success sustained by permanently
5 inflated electricity rates.

6 Point 5: Nuclear power production is a
7 high-risk activity requiring extraordinary degrees
8 of regulation, quality control and safety
9 assurance. It's a statistical fact that if new
10 reactors are built while others age and their
11 lifetimes are extended beyond the range of
12 operational experience, the likelihood of a major
13 accident will increase. A single accident would
14 not only threaten public health and safety and
15 produce potentially severe economic damages; it
16 would also derail projects under construction and
17 the continued operation of existing nuclear plants.
18 The cost to the public could be enormous. The
19 nuclear power industry is a tightly-coupled system.
20 The future of U.S. reactor projects is vulnerable
21 to failures across reactor types, across failure
22 modes, and across locations across the globe. Here
23 in the U.S., a letter to the Nuclear Regulatory
24 Commission from Congressman Ed Markey, dated March

1 7th, 2011, just days before the Japanese earthquake
2 and reactor failures, warns of new analyses of the
3 seismic vulnerabilities of the AP1000 reactor
4 design. I'm attaching a copy of that letter for
5 your review.

6 Point Number 6: Building new nuclear
7 plants would also entail massive opportunity costs,
8 shifting precious funding away from research,
9 development and investment in genuinely clean
10 energy technologies. A number of North Carolina's
11 universities and companies are working toward these
12 policies and more positive visions, and can become
13 key sites for economic development if that process
14 is not sidetracked by unwise policy choices.

15 Point 7: Although nuclear energy does
16 produce fewer carbon emissions than fossil fuels,
17 it is not free of carbon emissions, as its
18 advocates claim. An analysis by Dr. Arjun
19 Mahhijani of the Institute for Energy and
20 Environmental Research, available at the website
21 cited in my document, provides one example of a
22 road map for reducing greenhouse emissions more
23 effectively by avoiding new nuclear power projects.
24 I'm attaching a four-page summary of that analysis

1 for review. The entire book is available on their
2 website.

3 Point 8: Although my focus here is on
4 the economics of building new nuclear plants, we
5 should not forget that no solution has yet been
6 found in the U.S. or elsewhere to the problem of
7 nuclear waste disposal. Spent nuclear fuel is
8 piling up at sites across the nation, including
9 here in North Carolina and in our immediate
10 neighborhood at the Shearon Harris site. With no
11 solution to this problem in sight, it makes no
12 sense to build new reactors that would accelerate
13 the production of nuclear waste. Accumulating
14 nuclear waste, which is fatal for human life and
15 vulnerable to accidents or terrorist attacks, may
16 be another fatal flaw in proposals for nuclear
17 expansion.

18 So to conclude, I am attaching a document
19 comprising a series of reports by the Center for
20 American Progress, which further illuminates some
21 of the points above. Although I have no connection
22 to that organization, I have found their analysis
23 helpful, and I hope you will, also. So I would
24 like the three attachments to be included in the

1 record with my testimony.

2 So at a time when the economic situation
3 has severely hurt so many of North Carolina's
4 families, shifting the risks and costs of new
5 nuclear construction to those families is not a
6 reasonable or prudent choice, nor does it make
7 sense from an economic development, economic
8 sustainability or environmental sustainability
9 perspective. So please deny any and all efforts by
10 Duke Energy and Progress Energy to expand their
11 profits at the expense of ratepayers and taxpayers.

12 Thank you for your attention to my
13 comments and for all your efforts to protect and
14 serve the people of North Carolina.

15 CHAIRMAN FINLEY: Thank you, Dr.
16 Kinsella. Are there questions?

17 (No response.)

18 CHAIRMAN FINLEY: There appear to be
19 none. We appreciate you coming, and your three
20 attachments to your March 15, 2011 letter will be
21 marked for identification as Kinsella Exhibit
22 Number 1. Thank you for coming.

23 DR. KINSELLA: Thank you, sir.

24 (KINSELLA EXHIBIT NUMBER 1 WAS

1 MARKED FOR IDENTIFICATION.)

2 MS. RANKIN: Kendall Hale.

3 (WHEREUPON, KENDALL HALE WAS CALLED AS A WITNESS,
4 DULY SWORN, AND TESTIFIED AS FOLLOWS:)

5 MS. HALE: Thank you very much for taking
6 the time to hear me. I'm not an expert. I'm a
7 concerned citizen --

8 CHAIRMAN FINLEY: I'm sorry. Let's get
9 your name and address before we start, please,
10 ma'am.

11 MS. HALE: My name is Kendall Hale. I'm
12 a resident of Fairview, North Carolina, 15 minutes
13 away from Asheville. I am a small business owner,
14 a wellness provider, a massage therapist and a yoga
15 teacher, and I am a concerned citizen.

16 I watch in horror as we sit and watch the
17 nuclear disaster unfolding in Japan. And I would
18 be lying if I didn't tell you that I am deeply
19 frightened. My son is 22, and he's a student at
20 Stanford. And as we speak, I don't know for a
21 fact, but there could be radiation at this moment
22 moving towards the coast of California to poison
23 him and many other of our fellow American citizens.

24 But I am here because I feel a deep

1 responsibility to advocate for the protection of
2 the people in the Carolinas. To me, Duke Energy is
3 an icon of the crisis before us. My understanding
4 is that it once used to be a local, primarily
5 hydroelectric power company that provided clean,
6 homegrown power to the people in the Carolinas.
7 Today, I feel this is a colossus in the utility
8 world, owning a huge portfolio of what I have come
9 to understand is dirty energy, coal, oil, nuclear
10 and natural gas, that depends on the importation of
11 fuel to its service areas, fuel that generates
12 waste, solid, liquid and airborne, that threatens
13 our health and our security.

14 Duke owns seven nuclear power plants at
15 three locations in the Carolinas. I hope I'm
16 correct about that. And I am here today to ask you
17 to please say no to Duke's request to increase its
18 rates to yet build another nuclear power plant at a
19 site near the town of Gaffney, South Carolina,
20 which is less than 20 miles down the Broad River,
21 known as the 'William State Lee.' It's 50 miles
22 from Hendersonville, and it's less than 60 miles
23 from Asheville, which is my home. This request, to
24 me, is unacceptable because it will force Duke's

1 customers to pay for an outdated, unnecessary,
2 dangerous nuclear reactor that could take up to a
3 decade or more to build.

4 I really feel like it is time for the
5 North Carolina Utility Commission to leave behind
6 what I consider to be old, outdated, 20th century
7 thinking, which enables large energy corporations
8 like Duke to saddle their customers, with little
9 consideration for their health, for their economic
10 well-being, and for the sustainability to our
11 region. It is my understanding, and I'm new to a
12 lot of this -- I've been lobbying on behalf of
13 House Bill 135 -- but it is my understanding that
14 the Utility Commission is mandated to support
15 what's called the least cost energy path, so rather
16 than tax our electric bills now with Duke's scheme,
17 I would ask you to think seriously about why could
18 we not implement a system of inverted utility rates
19 that would reward all of the taxpayers for efforts
20 at conservation, investment in energy efficiency,
21 and at the same time, lower their bills. This
22 could drive the creation and innovation of new
23 clean renewable energy industries that I think we -
24 - and we all would agree -- desperately need now

1 for jobs, for employment. And given the increasing
2 instability in the Middle East, I think we would
3 all agree we are certainly -- it is critical to
4 become energy independent.

5 I am here today in Raleigh, as I
6 mentioned, to lobby for the second time for House
7 Bill 135, the Efficient and Affordable Energy Rates
8 Bill. And if this bill could pass, we could
9 implement inverted utility rates in our state.
10 There are seven other states that have done this.
11 And you know what, we could prevent the need to
12 build new nuclear power plants.

13 Thank you for your attention.

14 CHAIRMAN FINLEY: Thank you, Ms. Hale.
15 We appreciate you coming today.

16 MS. RANKIN: Jean Larson.

17 (WHEREUPON, JEAN LARSON WAS CALLED AS A WITNESS,
18 DULY SWORN, AND TESTIFIED AS FOLLOWS:)

19 MS. RANKIN: Please state your name and
20 your affiliation for the record.

21 MS. LARSON: Jean Larson. I am a private
22 citizen. I come from Little Sandy Mush in Madison
23 County.

24 I am concerned about the large amount of

1 money that would be created for Duke Power by the
2 proposed rate hike that would support incumbency
3 capitalism. It would support more of the energy
4 industries already in place, which are overseen by
5 agencies and commissions whose members often come
6 out of these same industries.

7 Why are we thinking about tying up this
8 money for old ways of producing energy that are
9 harmful to the life of all? In sixty years we have
10 not figured out what to do with nuclear waste. At
11 a time when we have seen disasters using coal, oil,
12 nuclear, and there's much controversy over
13 hydrofracking for gas, let's give innovation
14 capitalism a chance. Efficiency and conservation
15 measures would reduce the electric load so we would
16 not need to build new electric -- nuclear plants.
17 They would also provide good jobs.

18 So, please, use this opportunity to allow
19 for innovation and not more of the same. Thank
20 you.

21 CHAIRMAN FINLEY: Thank you, Ms. Larson.
22 We appreciate your coming today.

23 MS. RANKIN: Beth Henry.

24 (WHEREUPON, BETH HENRY WAS CALLED AS A WITNESS,

1 DULY SWORN, AND TESTIFIED AS FOLLOWS:)

2 MS. RANKIN: Please state your name and
3 affiliation for the record.

4 MS. HENRY: I'm Beth Henry, a citizen
5 from Charlotte. As customers struggle with
6 unemployment, rising food costs, devastated home
7 values and depleted retirement accounts, it is
8 neither prudent nor fair to make us pay up front
9 for expensive, risky nuclear projects.

10 I've attached to my testimony a list that
11 I found, and I've given the source, listing 39
12 separate categories of nuclear project risks, many
13 of which have already become reality, such as
14 declining demand, delays, plummeting natural gas
15 prices, and escalating construction costs. Just
16 like Cliffside and Edwardsport, the first
17 generation of new nuclear plants will predictably
18 cost more than Duke projects. Many of the
19 foreseeable dangers are not even on the list, such
20 as terrorist attacks, worsening hurricanes, extreme
21 heat. If terrorists fly a 747 into a reactor when
22 our lake temperatures are at their hottest, we
23 could be like Japan, but with hot lake water
24 instead of cold sea water as a last resort.

1 Forcing ratepayers to invest almost half
2 a billion dollars, considering what we've already
3 invested, would increase the likelihood that we
4 will ultimately build unneeded costly nuclear
5 plants, because the more we invest, the harder it
6 will be for you to deny approval of the plants.
7 Just like we taxpayers bailed out banks that were
8 too big to fail, we'll be bailing out costlier
9 nuclear plants because we'll have too much invested
10 to cancel them.

11 The financial meltdown also showed the
12 dangers of improperly allocating economic risk.
13 People who made tiny down payments on big houses
14 they couldn't afford acted imprudently because they
15 had little at stake. If you make customers pay up
16 front and, thus, bear all risk of cancellation, you
17 are encouraging Duke to act imprudently because
18 Duke will have little at stake.

19 I'm trying to save money to care for a
20 younger sister with cerebral palsy, epilepsy and
21 MS. My husband and I are facing life on a fixed
22 income. We can't risk much of our savings in the
23 stock market, so we're earning about 1 percent
24 interest right now. Utility costs are a

1 significant part of our budget, but Duke wants to
2 take money from us now for a plant that might
3 produce electricity in 10 years, use our money to
4 plan and finance the plant, and then pay Duke a
5 guaranteed 11-1/2 percent return on investment? I
6 think that's how it worked, but it's hard to even
7 believe.

8 We customers have already been tagged
9 with a -- I think about, according to the computer,
10 \$172 million in development costs. If there's a
11 next installment, Duke should pay it. Their fourth
12 quarter income in 2010 was \$427 million. Duke's
13 profits rose 23 percent in 2010. Duke wants to buy
14 Progress and is already talking about more
15 acquisitions. If new nuclear plants are such a
16 great idea, then let Duke invest some of its own
17 money.

18 How can Mr. Rogers tout purpose-driven
19 capitalism? Capitalists earn money by beating the
20 competition and taking risks. Duke has no
21 competition. And here in the Legislature and
22 Congress, they're seeking to have their company
23 protected from all risk. That is not capitalism;
24 that is a forced transfer of wealth to the investor

1 class from working class, middle class and poor
2 people.

3 Many proposed nuclear plants have been
4 canceled since the financial meltdown because they
5 posed a huge investment risk. That is real
6 capitalism at work, markets responding to risk.
7 Only in southern states like us with captive
8 customers, where politicians routinely do the
9 utilities' bidding, do nuclear plants remain on the
10 drawing board. So let's be honest, it's really
11 about political influence.

12 Our utilities have already gotten CWIP.
13 They're working on super-CWIP to make sure they get
14 the profits, but shed the risks. More than one
15 legislator has told me that not a single bill has
16 passed in the North Carolina Legislature since
17 they've been there that Duke didn't want to pass.
18 A Republican legislator told me that NC SAVES, a
19 program to weatherize low-income housing, was
20 stopped dead in committee simply because the
21 utilities said no.

22 But you are not a political body. You
23 don't depend on campaign contributions. You're not
24 subject to backdoor lobbying. Your job is to

1 ensure that Duke exercises the same prudence as
2 firms in a competitive market. Firms in
3 competitive markets are not building nuclear
4 plants. It is neither prudent nor fair to impose
5 all development costs on ratepayers and, thus,
6 encourage Duke to build nuclear plants instead of
7 cheaper, safer alternatives. Thank you.

8 CHAIRMAN FINLEY: Ms. Henry, if you will
9 leave the list of your risks, we will identify that
10 as an exhibit.

11 MS. HENRY: Okay. Thank you.

12 CHAIRMAN FINLEY: We will identify Ms.
13 Henry's list of risks as Henry Exhibit Number 1.

14 (HENRY EXHIBIT NUMBER 1 WAS
15 MARKED FOR IDENTIFICATION.)

16 MS. RANKIN: Pat Moore.

17 (WHEREUPON, PAT MOORE WAS CALLED AS A WITNESS, DULY
18 AFFIRMED, AND TESTIFIED AS FOLLOWS:)

19 MS. RANKIN: Please state your name and
20 address for the record.

21 MS. MOORE: I'm Pat Moore from Charlotte,
22 and thank you for the opportunity to speak today.

23 I have a confession to make. I've been
24 arrested twice, first at age 70. We crossed the

1 property line at Duke Energy to present a call to
2 conscience to Jim Rogers, to request that Duke
3 phase out the use of coal when safe and cost
4 effective energy is available. Mr. Rogers did not
5 respond. The second time I was arrested in
6 Washington when hundreds of us asked President
7 Obama to enforce the rules of the Environmental
8 Protection Agency, to phase out the use of coal,
9 and to protect the citizens of Appalachia, some of
10 whom are paying with their lives.

11 I'm here today as a grandmother. I never
12 made a public speech until I was 70. I'm here
13 because I'm afraid for this community. When my
14 ancestors came to this region in the 1700's, it was
15 all forest and clean water and air. They worked
16 very hard to clear land and grow crops. As time
17 passed, the forests became cities. Once clear
18 skies and water now made people ill. Just as
19 people banded together in earlier years to raise
20 barns and care for the sick, today we must look to
21 the health and well-being of the whole community,
22 not just for the financial health of one
23 corporation.

24 I'm here today to ask the members of the

1 Utility Commission to think about the 267 million
2 which will be decided by you, but will be paid by
3 the ratepayers of this community. As you've heard,
4 people are struggling to make bills and find jobs.
5 We understand that some of you may not think
6 there's viable alternative energy available. Many
7 of us who are speaking today do not believe that
8 the proposal being considered at this hearing will
9 provide low cost energy going forward. People have
10 different views on this subject, but even Duke
11 Energy spokespersons agree that fossil fuel should
12 be phased out.

13 But what does Duke propose for the 21st
14 century solution? Nuclear, a form of energy not
15 even being considered by the private sector because
16 it's too expensive, too dangerous, and produces
17 waste that people don't even want to pass through
18 their communities. Others will address the issue
19 of Japan and the epic tragedy there. I had put two
20 nuclear facilities at risk, then I changed it to
21 three. Now I understand it's six facilities which
22 tremble on the abyss in that country. I wonder if
23 when the nuclear plants were proposed in this rural
24 area of northern Japan, citizens were told that it

1 was clean energy and would create jobs. I wonder
2 if the proponents of nuclear energy in Japan are
3 now facing their decision with dreadful second
4 thoughts. A nuclear spill is devastating. On the
5 other hand, do you know what a solar spill is
6 called? Sunrise, and it happens every day.

7 Programs for conservation and clean
8 sources of energy are available. They are cost
9 effective. They have no dreadful side effects.
10 Conservation and clean energy for the 21st century.

11 Duke proposes nuclear, which will only
12 come on line more than a decade from now, if ever,
13 as you've already heard many times this morning.
14 Duke has lobbied the Legislature extensively for a
15 twofold purpose: first, to eliminate support for
16 clean sources of energy and, second, to ask for an
17 additional \$267 million to support nuclear.
18 Nuclear energy is expensive, dangerous, and we're
19 learning just how expensive and dangerous. And
20 this community is being asked to accept both the
21 cost and the risk. I don't understand this. Why
22 is Duke planning to build nuclear facilities which
23 are still not certified as safe and reliable? Why

1 is this rash plan even being considered?

2 You'll hear today from people who are
3 highly knowledgeable about the issue of energy
4 production in this community, and each of you, in
5 your role as Commissioner, has great understanding.
6 How can the experts and you, as Commissioners, come
7 together to make the best decision for this
8 community, a decision which will have great
9 consequences for all our futures? What will be
10 recorded about our choices concerning this most
11 important issue of energy? What will our families
12 remember us for in the coming years? Will they
13 remember our foresight and courage in doing what is
14 in the best interest not only of those who live
15 today, but future generations? Embracing a path of
16 energy efficiency, renewable power and cogeneration
17 would create jobs and a healthier planet right
18 away. You have the power as Commissioners to make
19 this wise choice. As a citizen of this community,
20 I'm relying on you.

21 CHAIRMAN FINLEY: Thank you, Ms. Moore.

22 MS. RANKIN: Bob Jackson. While he's
23 coming up, I would ask that this be marked Moore
24 Exhibit 1, her statement.

1 CHAIRMAN FINLEY: She read it verbatim,
2 did she not? I think she read it --

3 MS. RANKIN: I think she did. There's
4 nothing extra.

5 CHAIRMAN FINLEY: We won't mark it.

6 (WHEREUPON, BOB JACKSON WAS CALLED AS A WITNESS,
7 DULY AFFIRMED, AND TESTIFIED AS FOLLOWS:)

8 MS. RANKIN: Please state your name for
9 the record.

10 MR. JACKSON: Okay. I'm Bob Jackson, and
11 I'm the State Director for AARP North Carolina. I
12 live in Durham.

13 Mr. Chairman and members of the
14 Commission, thank you for this opportunity to speak
15 today. AARP is a member organization of 1.1
16 million members across North Carolina. We are a
17 wonderfully diverse membership. And for many of
18 our members and, more broadly, the older consumers
19 across North Carolina, home energy bills make up a
20 significant percentage of their monthly budgets,
21 yet these same families have not received a Social
22 Security cost of living adjustment in two years,
23 and many have seen their retirement savings eroded
24 due to the economic downturn. Therefore, the cost

1 of home energy is of vital importance to them and
2 their health and safety. That is why I'm here to
3 speak out against Duke's request to have you
4 determine that it is prudent for them to spend
5 another \$287 million for a nuclear power plant that
6 isn't even built.

7 Your decision to grant the request will
8 mean that our rates will inevitably be increased by
9 another \$287 million. We are against being the
10 utility's banker and taking all the risk of cost
11 overruns for the plant. If the financial markets
12 don't want to take on the risk, why should the
13 consumers? Duke has already gotten \$172 million of
14 ratepayers money granted for preconstruction costs
15 for the projected Lee nuclear power plant. Now
16 Duke wants more, even though the record in this
17 case shows that it's neither reasonable nor prudent
18 to grant this request. The plant is behind
19 schedule, the estimated costs keep increasing, and
20 the plant may not be cost effective under current
21 market conditions. If Duke ultimately cancels the
22 plant, the consumers don't get a refund.

23 We hear from our friends and colleagues
24 in other states about how costly these up-front

1 payments are for consumers. In Florida, consumers,
2 it is estimated, will be paying up to \$50.00 more
3 per month in prepayment costs through 2020. In
4 South Carolina, rates will increase 2 percent per
5 year for 10 years. In Georgia, bills will increase
6 up to \$10.00 per month. Any of these plants could
7 end up being canceled. Many of our members are
8 struggling to make ends meet, and to them, the
9 prospect of yet another utility rate increase and
10 taking on the risk of a new nuclear plant is a
11 tough pill to swallow.

12 We ask you to oppose this request. Thank
13 you.

14 CHAIRMAN FINLEY: Thank you, Mr. Jackson.
15 Are there other witnesses?

16 MS. RANKIN: Two more.

17 CHAIRMAN FINLEY: Two more. Okay.

18 MS. RANKIN: Harry Phillips.

19 (WHEREUPON, HARRY PHILLIPS WAS CALLED AS A WITNESS,
20 DULY SWORN, AND TESTIFIED AS FOLLOWS:)

21 CHAIRMAN FINLEY: Would you please state
22 your name and affiliation, if any.

23 MR. PHILLIPS: My name is Harry Phillips.
24 Good morning. I'm associated with the North

1 Carolina Waste Awareness Reduction Network, the
2 Piedmont Progressives, and the North Carolina Green
3 Party. I am here to voice strong objections to
4 Duke's request for additional millions to fund
5 preconstruction costs for its projected Lee nuclear
6 plant. As a Duke ratepayer and a concerned
7 citizen, it is neither reasonable nor prudent for
8 the Utilities Commission to grant these additional
9 funds.

10 First, I object to the PR campaign that
11 Duke CEO Jim Rogers engineered during the past
12 three to four years. Having lived in Charlotte
13 until last year, I was among the energy activists
14 in that community who greeted with suspicion, but
15 some small interest, Rogers' claims in The
16 Charlotte Observer that Duke Energy was fully
17 committed to diversifying its energy portfolio,
18 insisting that wind and solar were on Duke's agenda
19 and that these renewables must be in balance with
20 coal and nuclear. These pieces persisted during
21 the Cliffside fight. When the giant Cliffside
22 facility was approved, however, these pieces
23 ceased. The rhetorical smokescreen was no longer
24 needed. Duke's commitment to alternative energy

1 essentially is no commitment at all. For example,
2 our state's largest wind turbine farm is not being
3 developed by Duke, but by a company from Oregon.
4 More disturbing are the energy projections Duke
5 aims for by 2030, and these data reveal that Duke
6 intends to produce 51.3 percent of its energy from
7 nuclear, 29 percent from coal, and only 3 percent
8 from renewable sources. These estimates appear in
9 Duke's application for preconstruction funding for
10 the Lee nuclear project. What happened to the
11 green energy champion that Rogers assured us of?

12 I also object to the risks to human life
13 we will endure should Duke's application be
14 approved. Japan, an evolved first-world country
15 with a reputation for sound engineering, is today
16 overwhelmed from damage done to several of its
17 reactors. One hundred and seventy thousand people
18 had to be evacuated as of Sunday on the Japanese
19 coastline due to radioactive leaks. Military and
20 rescue personnel were stepped up from 50,000 to
21 more than 100,000. The greatest factor in the
22 Japanese nuclear disaster is the uncertainty of the
23 extent of the damage. Do we want to live with this
24 kind of risk, a risk that includes exposing

1 ourselves to unknown levels of radiation?

2 And what do our seniors think of a
3 ratepayer hike that could be as high as 50 percent,
4 given that it will take close to a decade to
5 complete reactor construction? What do North
6 Carolinians beset by the economic recession think
7 about such a rate hike? Duke and Progress would do
8 well to study recently released U.S. Census Bureau
9 data and note that the poverty rate in our state
10 increased from 12 percent in 1999 to more than 16
11 percent in 2009. Like many corporations these
12 days, Duke and Progress aim to foist onto the backs
13 of workers the costs of new nuclear facilities.
14 That Wall Street refused to fund this project
15 alerts us that this latest venture is too risky and
16 a bad investment. It is our responsibility to
17 counter the exploitation that new nuclear plants
18 would bring, and there is no shortage of models in
19 our country and beyond. In our own state, the late
20 Dr. John Blackburn, former chair of the Economics
21 Department at Duke University, provides compelling
22 scientific analysis that argues that because of our
23 potential for producing electricity from renewable
24 sources, especially solar, and because the

1 projected need for electricity in our state
2 typically exceeds our actual use, a crossover to
3 renewable sources could eliminate the need for new
4 nuclear and coal plants.

5 To conclude, it's clear that Duke and
6 Progress envision North Carolina's energy future
7 deriving from coal and nuclear. Despite a windy PR
8 program to the contrary, they are choosing to
9 neglect safer, cleaner, cheaper and more efficient
10 options available through renewables. It should be
11 clear now that the public interest and Duke's
12 profit-driven agenda are far apart. It is my hope
13 that the Utilities Commission will respect the
14 interests of those in our state who desire a clean
15 energy future and reject Duke's application. Thank
16 you.

17 CHAIRMAN FINLEY: Thank you, Mr.
18 Phillips. We have one more, Ms. Rankin?

19 MS. RANKIN: Hope Taylor.

20 (WHEREUPON, HOPE TAYLOR WAS CALLED AS A WITNESS,
21 DULY SWORN, AND TESTIFIED AS FOLLOWS:)

22 CHAIRMAN FINLEY: Will you state your
23 name and affiliation, if any.

24 MS. TAYLOR: I am Hope Taylor. I'm

1 Executive Director of Clean Water for North
2 Carolina, a statewide environmental justice
3 organization.

4 CHAIRMAN FINLEY: Make your statement,
5 please, ma'am.

6 MS. TAYLOR: As an environmental justice
7 organization of over 1,000 members and volunteers
8 in 40 North Carolina counties, we are committed to
9 protecting the environmental health and quality of
10 life of those who are most vulnerable in North
11 Carolina, communities of color, low income
12 communities, and those who are in urban or rural
13 underserved areas.

14 When my organization strongly opposed the
15 inclusion of authorization for the utilities to
16 seek recovery of preconstruction and construction
17 costs in the 2007 legislation couched as a
18 renewable portfolio standard bill, we knew it was a
19 danger to the people of North Carolina in several
20 ways. First, it artificially and unstably shifted
21 the economic outlet for construction of new base
22 load plants, especially nuclear, even in a
23 faltering demand picture, by driving investment to
24 the highest cost, least flexible option for meeting

1 future power needs at the expense of ratepayers.

2 Second, it increased the potential for
3 massive new water withdrawals that could put our
4 state's ever tightening water resources under
5 further stress and less able to meet other crucial
6 needs. When you realize that the evaporation or
7 water lost in North Carolina rivers and lakes is in
8 excess of 200 million gallons per day and,
9 according to our recent calculations, evaporation
10 downstream due to hot discharges from these plants
11 is an added 60+ million gallons a day, you see it
12 isn't just a matter of withdrawal and use; it's a
13 theft of our state's waters and a massive subsidy
14 to profitable corporations.

15 Third, as demonstrated in North Carolina
16 plants in 2007, when power is most often needed, in
17 extremely high temperatures, is when cooling water
18 may be least available for cooling at current or
19 new nuclear plants, especially causing power-downs
20 and completely undermining the expectation of
21 reliable power.

22 Fourth, the growing legacy of ever more
23 extensively degraded resources, routine releases of
24 radioactivity to air and surface water, groundwater

1 contamination from leaking coolant pipes, long-term
2 highly hazardous storage, treatment and
3 transportation of wastes and decommissioned
4 reactors.

5 Fifth, the massive undermining of our
6 democracy and security by the growing corporate
7 strength of behemoths whose control extends not
8 just to many regulators and legislators, but to
9 local governments, educational institutions and
10 even our media. It's all about the scale of the
11 investment that a utility can scam us all into
12 making for them, rather than any genuine and
13 documented need for additional power.

14 Sixth, the strangling of investment in
15 all options for other genuinely reliable, clean and
16 affordable energy solutions, particularly
17 efficiency. And it goes without saying at this
18 time when we're watching this tragedy unfold, that
19 each and every new nuclear installation is an
20 opportunity for mishap or disaster on a regional or
21 larger scale, whether by anyone's intent or through
22 one of many unforeseen accident scenarios.

23 Since 2008, a growing Alliance of
24 consumer, religious, senior, justice and

1 environmental groups has sought to create an
2 independently administered statewide efficiency
3 program, NC SAVE\$ ENERGY, based on successful
4 models in other states. Such an approach would,
5 through a public benefit fund, remove the conflict
6 of interest inherent in allowing investor-owned
7 utilities, whose mission is to sell power, to own
8 their own efficiency programs. The utilities,
9 unsurprisingly, have fought it first at the
10 Utilities Commission and again in the General
11 Assembly. With the small charge that the Alliance
12 is proposing on monthly bills, a fund of about \$25
13 to \$60 million -- to \$30 million a year -- I'm
14 sorry; that's an error -- with the current charge
15 we're proposing, would be used to create a -- to
16 weatherize about 5,000 homes a year, create a
17 modest revolving loan fund for residents of any
18 income, and carry out public education programs and
19 incentives, as well as contractor training and
20 certification. If, instead, that public benefit
21 fund were to receive an infusion of \$459 million
22 -- should be a familiar number -- even spread over
23 a 10-year period, that would weatherize more than
24 80,000 homes and further flatten Duke's exaggerated

1 projections of demand growth, its ostensible
2 justification for building new plants. Projected
3 annual savings for participating households would
4 average over \$1,000 in utility bills, freeing up
5 substantial household resources to invest in local
6 economies, and creating about five times as many
7 jobs as constructing and operating new power
8 plants.

9 There's nothing more reliable, round-the-
10 clock, least cost, value creating for the public
11 and job generating than making existing homes more
12 efficient. It's long past time for the Commission
13 and the Public Staff to cease casting their lot
14 with the most costly approach for everyone except
15 the utility shareholders.

16 When we first opposed CWIP, we saw many
17 down sides to forcing ratepayers to invest in
18 plants that were only in the shareholders'
19 interest. Given what we know about the risks and
20 costs of the plants that Duke wants to build with
21 the \$459 million recovered in its rates, if the
22 Commission approves, actually, the very best
23 scenario, if the Commission approves that, would be
24 that the plants are never built and the ratepayers

1 would have thrown their money away.

2 But if, instead, the Commission refuses
3 to grant that approval for that cost recovery,
4 revisits its consideration of an independent
5 administrator or other means of providing the true
6 least cost energy, we believe that will be the
7 substantial and truly correct interested approach
8 to meeting North Carolina's future energy needs.
9 Thank you very much.

10 CHAIRMAN FINLEY: Thank you very much,
11 Ms. Taylor. All right. We've gone a little bit
12 over the hour that we allotted for public
13 witnesses, but we appreciate your expeditious
14 testimony, we appreciate the points you made.
15 We're going to take about five minutes in place,
16 and then we're going to call Mr. Bradford, Mr.
17 Runkle. Let's take about five minutes.

18 (RECESS TAKEN FROM 10:20 A.M. UNTIL 10:25 A.M.)

19 CHAIRMAN FINLEY: Mr. Runkle?

20 MR. RUNKLE: Mr. Chairman, at this time,
21 the Public Advocacy Groups would like to call Peter
22 A. Bradford to the stand.

23 (WHEREUPON, PETER A. BRADFORD WAS CALLED AS A
24 WITNESS, DULY SWORN, AND TESTIFIED AS FOLLOWS:)

1 DIRECT EXAMINATION BY MR. RUNKLE:

2 Q. Mr. Bradford, did you submit prefiled testimony in
3 this proceeding?

4 A. I did.

5 Q. Do you have any additions or corrections to that
6 testimony?

7 A. No.

8 Q. And attached to your testimony were two documents
9 that you called Appendix A, which was your CV, and
10 Appendix B was the "Economics of Low-Carbon Options
11 That Have Changed Dramatically"?

12 A. That's right.

13 Q. And, in fact, during the recess, I gave the
14 Commission and parties a color copy of your
15 Appendix B. Do you have that in front of you?

16 A. I do.

17 Q. Is this the same as your Appendix B that was with
18 your prefiled testimony, except that it's in color?

19 A. It is.

20 MR. RUNKLE: At this time, we'd like to
21 mark for identification as Public Advocacy Groups'
22 Bradford Exhibits 1 and 2 his CV and the "Economics
23 of Low-Carbon Options."

24 CHAIRMAN FINLEY: Mr. Bradford's

1 Appendices A and B will be premarked as in the
2 filing.

3 (PUBLIC ADVOCACY GROUPS' BRADFORD EXHIBITS
4 1 AND 2 WERE MARKED FOR IDENTIFICATION.)

5 MR. RUNKLE: All right. Thank you, sir.

6 Q. Mr. Bradford, have you created a summary of your
7 testimony?

8 A. Yes.

9 CHAIRMAN FINLEY: Why don't we admit his
10 testimony and then let him summarize.

11 MR. RUNKLE: Okay.

12 CHAIRMAN FINLEY: Mr. Bradford's prefiled
13 direct testimony dated February 28, 2011 will be
14 copied into the record as though given orally from
15 the stand.

16 MR. RUNKLE: Thank you, sir.

17 (THE PREFILED DIRECT TESTIMONY OF PETER
18 A. BRADFORD WILL BE COPIED INTO THE
19 RECORD AS IF GIVEN ORALLY FROM THE
20 WITNESS STAND.)

1 **Q. PLEASE STATE YOUR NAME, ADDRESS AND CURRENT POSITION.**

2 **A. My name is Peter A. Bradford. My business address is PO Box 497, Peru,**
3 **Vermont, 05152. I am an adjunct professor at Vermont Law School – where**
4 **I teach a course entitled Nuclear Power and Public Policy. I am also**
5 **president of Bradford Brook Associates.**

6 **Q. PLEASE STATE YOUR EXPERIENCE IN THE FIELD OF UTILITY**
7 **REGULATION.**

8 **A. I have chaired the public utility regulatory commissions in Maine (1974-5**
9 **and 1982-87) and New York (1987-95). I was also a commissioner on the**
10 **U.S. Nuclear Regulatory Commission (1977-82). Since 1995, I have taught**
11 **several courses related to energy policy, utility regulation and nuclear power**
12 **at Yale and at Vermont Law School as well as in seminar programs at the**
13 **Institute of Public Utilities and elsewhere. I have also worked with the**
14 **Regulatory Assistance Project and have testified before numerous state**
15 **utility regulatory commissions.**

16 **I have consulted in several countries – including China, India, Russia and**
17 **Indonesia – on issues pertaining to utility regulation and to nuclear power.**

18 **I was a member of the National Association of Utility Regulatory**
19 **Commissioners (NARUC) from 1971 until 1995 and served as its president**
20 **in 1987. I served on the Electric, Gas and Communications Committees as**
21 **well as on the Subcommittees on Nuclear Waste and Nuclear Economics. I**
22 **was also the liaison between the Nuclear Regulatory Commission and**

1 NARUC and have testified before the U.S. Congress at least 50 times on
2 issues relating to nuclear power.

3 My complete resume is attached as Exhibit A.

4 **Q. PLEASE DISCUSS YOUR EXPERIENCE IN REGULATING NUCLEAR**
5 **POWER AT THE STATE LEVEL.**

6 **A. As a regulator in New York and Maine, I chaired commissions deciding**
7 **cases involving rate implications and prudence concerning the Seabrook I**
8 **plant in Maine as well as the Shoreham and Nine Mile Point II plants in New**
9 **York. I chaired the New York and Maine commissions when those states**
10 **disengaged from the Shoreham and Seabrook plants in ways that resulted**
11 **in adequate power supplies, improved economic development and electric**
12 **rate impacts lower than would otherwise have occurred. We also decided**
13 **several proceedings allocating the costs of cancelled plants. I also**
14 **reviewed proposals to spread the cost of cleaning up the Three Mile Island**
15 **accident across all nuclear power plants.**

16 **More recently, I participated in the 2005 National Research Council of the**
17 **National Academy of Sciences panel evaluating the alternatives to**
18 **continued operation of the Indian Point nuclear units in New York. I was also**
19 **a member of the 2007 Keystone Center Nuclear Power Joint Fact Finding**
20 **project, which identified points of agreement among a broad range of**
21 **constituencies, including nuclear power plant owners and builders, on**
22 **issues relating to nuclear power costs and the role of nuclear power in**
23 **combating climate change. I served as a member and as chair of Vermont's**

1 Public Oversight Panel for the Reliability Audit of the Vermont Yankee
2 nuclear power plant. I am one of Vermont's two representatives on the
3 Texas-Vermont Low Level Waste Disposal Compact Commission.

4 In other countries, I have participated in evaluating new nuclear units as
5 an option in Ukraine for the European Bank for Reconstruction and
6 Development, in evaluating new nuclear power and decommissioning costs
7 in Armenia and in evaluating the regulatory structure that would oversee the
8 operating of the Mochovce nuclear plant in Slovakia.

9 **Q. PLEASE STATE THE MAIN POINTS THAT YOU WILL MAKE IN**
10 **YOUR TESTIMONY.**

11 **A. My testimony advises the North Carolina Utilities Commission not to grant**
12 **Duke Energy Carolina's application for approval of the decision to incur**
13 **another \$267 million in nuclear generation project development costs**
14 **between now and the end of 2013. I point out that the fundamental reasons**
15 **the Duke Energy put forth to justify the Lee project several years ago have**
16 **been substantially undermined by the events of the last three years.**
17 **Exposing North Carolina customers to costs amounting to additional**
18 **hundreds of dollars per family cannot be justified. Instead, the Commission**
19 **should rely on ratemaking approaches that restore the traditional balance of**
20 **risk between lenders and customers, under which risks are assumed by the**
21 **companies and financial institutions best able to assess and manage them.**

1 **Q. HAVE YOU TESTIFIED PREVIOUSLY IN NORTH CAROLINA**
2 **REGARDING EARLY DETERMINATIONS OF PRUDENCE FOR THE**
3 **NORTH CAROLINA SHARE OF THE LEE STATION?**

4 **A. Yes. I testified in this docket in April 2008.**

5 **Q. WHAT CHANGES SINCE YOUR PREVIOUS TESTIMONY BEAR ON THE**
6 **DETERMINATIONS THAT THE NORTH CAROLINA UTILITIES**
7 **COMMISSION MUST MAKE IN THE CURRENT CASE.**

8 **A. In 2008 many of the risks of charging the customers large sums of money**
9 **for a plant that would serve them – if at all – many years in the future were**
10 **clear in theory but not in fact. Now many of those risks have in fact come to**
11 **pass. The harm to customers is both clearer and more likely than was the**
12 **case when I last testified. For example:**

13 **(1) Duke Energy's need for the power from the Lee unit has declined**
14 **dramatically. In the 2008 proceeding, Duke Energy testified that it would**
15 **need 7000MW of new capacity by 2018 and 11,000 by 2027. In the current**
16 **proceeding, this need has shrunk to 2200MW by 2020 and 6000 by 2030**
17 **(Rogers testimony, pp. 5-6). Of course, even this reduced need figure is**
18 **subject to dispute.**

19 **(2) The projected in service date for the project has slipped three years,**
20 **from 2018 to 2021.**

21 **(3) Projected natural gas prices (and therefore the cost of combinations of**
22 **natural gas and renewable energy resources) are significantly lower than**
23 **was the case in 2008. Indeed, the U.S. Department of Energy's Energy**

1 Information Administration (EIA) recently lowered its gas price forecast
2 through 2035, noting "The annual average natural gas wellhead price
3 remains under \$5 per thousand cubic feet through 2022, but it increases
4 thereafter because significantly more shale wells must be drilled to meet
5 growth in natural gas demand and offset declines in natural gas production
6 from other sources.....Natural gas wellhead prices (in 2009 dollars) reach
7 \$6.53 per thousand cubic feet in 2035, compared with \$8.19 in AEO2010
8 (Annual Energy Outlook Early Release Overview, December 16, 2010)." Of
9 course, 2008 natural gas prices and price forecasts were considerably
10 higher.

11 (4) The so-called U.S. "nuclear renaissance" is in shambles, with almost
12 all of the projects having encountered some combination of cost overruns,
13 major delays or outright cancellation. The statement in the Duke Energy
14 application (p. 4) that "interest in new nuclear generation has increased in
15 the United States over the past several years" is incorrect. Most of the
16 projects that were said to constitute the "renaissance" in 2008 have been
17 cancelled, suspended or greatly delayed. One of the primary reasons is the
18 cost increases; EIA recently increased its estimate of the cost of new
19 reactors by 37% just during 2010.

20 **Q. WHAT IS THE SIGNIFICANCE OF DUKE ENERGY'S REDUCED**
21 **DEMAND FORECASTS SINCE THE 2008 PROCEEDING?**

22 A. First, the reduced demand indicates that the customers need not be
23 financing units whose completion is a decade or more beyond the date that

1 customer bills begin to reflect these increased costs. Second, reduced
2 demand means that the value of future energy and capacity will be lower.
3 As a result, committing customers to pay for a particularly expensive source
4 of generation makes no sense. Even if one assumes a future requirement
5 to reduce carbon emissions in the electric sector, combinations of efficiency,
6 renewables and natural gas are highly likely to meet this requirement less
7 expensively than new nuclear reactors given the lower demand forecasts for
8 the next decade.

9 **Q. WHAT IS THE SIGNIFICANCE OF THE DELAY IN THE PROJECTED**
10 **COMPLETION DATE?**

11 **A.** First, this three-year delay in the projected completion long before
12 construction has even begun demonstrates that the nuclear industry
13 remains subject to unforeseen major delays. While Duke Energy has not
14 acknowledged any increase in the project costs, some increase is likely to
15 result from this slippage. Furthermore, the costs to the customers of
16 providing construction financing for the project will certainly increase,
17 because any point in time at which rates are lowered by the subsidy that
18 customers are providing has moved further into the future.

19 **Q. WHAT IS THE SIGNIFICANCE OF THE DRAMATIC DECLINE IN**
20 **NATURAL GAS PRICES?**

21 **A.** First, this decline illustrates one of the major risks of nuclear construction,
22 namely the likelihood that changes in electricity markets while the reactors
23 are being licensed and built will make them uneconomic (or even more

1 uneconomic) by the time they are completed or during their operating lives.

2 This risk has rendered new reactors unable to access private capital
3 wherever competitive power procurement and power markets have become
4 the preferred way of buying and pricing electricity generation.

5 Second, the gap between electricity generated from natural gas and new
6 nuclear generation has grown so much larger that new nuclear generation
7 coming online is unlikely to be cost-effective at all for many years and may
8 well not be cost-effective on a discounted present value basis over its entire
9 operating life.

10 Third, falling gas prices also improve the competitive posture of renewable
11 energy sources by allowing the combination of new renewables and existing
12 or new gas plants to operate on a basis that renders meaningless
13 distinctions between intermittent and baseload power generation.

14 Fourth, today's low natural gas prices undermine arguments that natural
15 gas price "volatility" provides a valid reason for raising electric rates to pay
16 for new nuclear power. While it is true that gas prices are more volatile than
17 nuclear operating costs (though not necessarily more volatile than nuclear
18 construction costs), paying a price higher than the high point in a volatile
19 range is not an economically sensible way to buy price stability. For
20 example, paying 12 cents per kWh for nuclear power would be a foolish way
21 to avoid buying gas-fired electricity that was expected to vary between four
22 and eight cents per kWh.

1 Finally, at today's forecasted gas prices, fuel diversity considerations are
 2 unpersuasive justification for continued expenditure on the Lee units. Duke
 3 Energy's energy mix today is less than ten percent natural gas, so diversity
 4 concerns point toward increasing the gas share in any case. Nuclear output
 5 will expand somewhat if the capacity increases, i.e., uprates, at existing
 6 plants that are shown in Duke Energy's IRP are implemented, and this
 7 expansion will be less costly than the Lee units.

8 **Q. WHAT IS THE SIGNIFICANCE OF THE COLLAPSE OF THE U.S.**
 9 **"NUCLEAR RENAISSANCE" FOR THIS PROCEEDING?**

10 A. The companies across the country that were thought to be well on their way
 11 to building new nuclear reactors in 2008 are reevaluating that commitment
 12 in the face of declining demand, rising cost estimate, reduced cost
 13 estimates for alternatives, the absence of a federal policy requiring reduced
 14 green house gas emissions and the absence of additional federal subsidies
 15 for new reactors, especially loan guarantees. By way of example,

16 (1) In Missouri, the Legislature in 2009 declined to enact legislation
 17 permitting the charging of nuclear planning and construction costs to
 18 customers until the plant came on line. The would-be builder cancelled the
 19 plant.

20 (2) Exelon Corporation, the owner of the nation's largest reactor fleet last
 21 year, withdrew its application to build two reactors in Texas, citing changed
 22 economic conditions. Exelon CEO John Rowe told Bloomberg News, "We
 23 think natural gas will stay cheap for a very long time. ... As long as natural

1 gas is anywhere near current price forecasts, you can't economically build a
2 merchant nuclear plant." The article continues, "Rowe said that the price of
3 natural gas would have to rise to \$8 per million British thermal units and
4 permits for emitting a ton of carbon dioxide would have to be \$25 to make
5 the power prices from new merchant reactors competitive with gas-fueled
6 plants ... Absent a price on carbon dioxide emissions, gas would have to
7 rise to \$9 or \$9.50 to make the reactors economically attractive". While Mr.
8 Rowe is talking about merchant nuclear plants, his point about relative costs
9 applies to all new reactors. The only difference between regulated reactors
10 and merchant plants is in the ability of regulators to make customers finance
11 the plants, a feature that does not improve the economics of new nuclear at
12 all.

13 (3) In November 2010, Constellation Energy withdrew from the
14 consortium planning to build the Calvert Cliffs reactors in Maryland.
15 Constellation's stated reason was that the federal government's effort to
16 *make loan guarantee applicants pay a fee appropriate to the actual risk of*
17 *taxpayer loss made the project uneconomic.*

18 Of course, the risk of taxpayer loss for a plant financed with the aid of
19 federal loan guarantees is roughly the same as that of customer loss in a
20 state where the financing costs are imposed on customers. However, the
21 financial exposure of individual customers is much greater because the
22 number of North Carolina customers is so much smaller than the number of
23 U.S. taxpayers.

1 Exelon's overall assessment of the relative economics of low carbon
2 options for providing electricity services underwent a dramatic change in
3 2010, with new nuclear becoming significantly more expensive than the
4 options that Exelon is actually pursuing. Exelon's assessment of the
5 relative economics of these options is shown in Appendix B to this
6 testimony.

7 (4) In Florida, a state where four new nonmerchant reactors have been
8 proposed under a legal framework that permits premature cost recovery
9 from customers of the type that Duke Energy seeks in North Carolina, all
10 four plants have announced multiyear delays and significant cost estimate
11 increases. Public discontent over the rate increases implemented and
12 proposed to date has led to the replacement of most of the Florida utilities
13 commission.

14 (5) Several months ago, NRG Energy announced that it would reduce
15 monthly expenditures on its proposed new reactors at the South Texas site
16 by more than 90%. Because Texas is a power market jurisdiction, NRG
17 cannot be assured of recovering its costs unless it can deliver power at a
18 price competitive with the alternatives. It apparently could not find investors
19 and lenders willing to take the risks that Duke Energy seeks to impose on its
20 customers through the action that it asks of the Commission in this
21 proceeding.

22 **Q. WHAT OTHER ISSUES SHOULD BE RESOLVED BEFORE THE**
23 **COMMISSION PERMITS NORTH CAROLINA CUSTOMERS TO BE**

1 EXPOSED TO FURTHER RISK OF LOSS BY APPROVING THE
2 PRUDENCE OF ADDITIONAL EXPENDITURES ON THE LEE PROJECT?

3 A. At this point, there is little chance that the Lee project can produce
4 competitively priced electricity without (or even with) a federal loan
5 guarantee, which it has no immediate prospect of receiving. In addition, a
6 consolidation of nuclear projects in the Southeast, together with a
7 reshuffling of the ownership interests, seems very likely. The proposed
8 Duke/Progress merger is one potential pathway to this result. It is not at all
9 clear that the Lee units will survive this process. If they do, it is also not
10 clear that new owners will be required to shoulder a share of the cost
11 burdens already assumed by the existing customers. This issue will raise
12 serious fairness questions if some companies are permitted to charge large
13 costs to captive customers only later to sell shares of the plant to buyers
14 who will want to pay market based prices rather than make the captive
15 customers whole.

16 Q. IS THE LEE PROJECT LIKELY TO PROVIDE SIGNIFICANT NEW
17 EMPLOYMENT IN NORTH CAROLINA?

18 A. The project is of course located in South Carolina, and many of the jobs it
19 creates will be overseas. More importantly though, one must consider not
20 just the nuclear jobs created but the negative impact on jobs in other
21 sectors. The higher rates flowing from the actions requested in this
22 proceeding will have a negative impact on employment in North Carolina's
23 industrial and commercial sectors. Indeed, these customers are among the

1 leading challengers to further rate increases in Florida. In addition, the
2 commitment to new nuclear construction will reduce jobs in energy
3 efficiency and in other types of generation. No state ever improved its
4 economy by burdening it with electricity costs higher than those necessary
5 to meet customer demands efficiently and sustainably.

6 **Q. WHAT LESSONS CAN THE COMMISSION LEARN FROM THE EVENTS**
7 **OF THE THREE YEARS SINCE YOU LAST TESTIFIED BEFORE THE**
8 **NORTH CAROLINA COMMISSION AS TO THE PRUDENCE OF**
9 **INCURRING NUCLEAR PROJECT DEVELOPMENT COSTS FOR THE**
10 **LEE PROJECT?**

11 **A.** The project has been delayed a year for every year that has passed since
12 the 2008 proceeding. Customers are no closer to seeing electricity from the
13 Lee station than they were then. However, they are tens of millions of
14 dollars poorer. Now, with far less justification than existed in 2008, Duke
15 Energy is asking the Commission to more than double customer exposure
16 to cost and risk. No plumber in North Carolina could hope to get away with
17 such a request on an ordinary construction project.

18 In the 2008 proceeding, I indicated the types of risk that Duke Energy's
19 petition would shift onto the shoulders of its customers. These were "risk of
20 cost overruns, risk that the owners will not be able to meet schedules, risk
21 that the plant will operate poorly, risk that demand will be overestimated,
22 risk that other technologies will be available at lower costs". I also indicated
23 that Yucca Mountain would not be the repository for the spent fuel from the

1 Lee reactors. In the short space of three years, five of these six risks have
2 come home to roost, and of course the sixth – poor operation – is not yet a
3 possibility.

4 Finally, the Commission now has some experience with rate increase
5 requests flowing from its prudence determinations. It can judge for itself
6 whether it is really in a position to make detailed prudence determinations
7 on specific expenditures.

8 These developments all indicate the difficulties that the Commission faces
9 in assuring that North Carolina customers are protected from unreasonable
10 cost commitments if Duke Energy continues its current pursuit of the Lee
11 units. Cautious regulatory practice strongly supports denial of the
12 determination of prudence that Duke Energy is requesting in this case. Until
13 such time as additional loan guarantee funds are available and
14 consolidation of new reactor projects has occurred, extending a prudence
15 finding of the magnitude requested in this case virtually assures that Duke
16 Energy's North Carolina customers will pay more than their share of the
17 costs of a project that may well be cancelled or reorganized.

18 **Q. ARE ANY OF YOUR RECOMMENDATIONS FROM THE 2008**
19 **PROCEEDING PERTINENT TO THE DECISION THAT THE**
20 **COMMISSION MUST MAKE IN THE CURRENT CASE?**

21 Yes. In particular, I would again urge the Commission to cap any prudence
22 determination that it makes at a figure that does no more than maintain the

1 current state and value of the Lee project. No additional customer money
2 should go toward developing it under present circumstances.

- 3 • In addition, the Commission should indicate a maximum acceptable cost
4 for the Lee project itself. Such a determination need not be binding at this
5 time, but it would provide useful guidance to Duke Energy and to its
6 customers alike that the sky is not the limit where the Lee project is
7 concerned. Firm caps protecting customers from cost overruns were used
8 in New York, Pennsylvania, Connecticut and California in the 1980s as
9 well as with the Olkiluoto project currently under construction in Finland.

10 Given the instability in nuclear construction cost projections, such a
11 mechanism is likely to be needed to protect customers over the next
12 decade as well.

- 13 • Also, the Commission should revisit its determination that payments to
14 secure the long lead time items are "project development costs." Such
15 payments are very much part of the construction process. Their prudence
16 requires detailed separate review of evidence not presented in this
17 proceeding. There is no urgency requiring the payment of large sums to
18 hold a place in line at overseas factories until North Carolina has a much
19 clearer picture of which, if any new reactors are going to get built.

- 20 • Furthermore, falling costs of alternatives make it more urgent now than in
21 2008 that the Commission require that Duke Energy use a competitive
22 power procurement process to screen possible power supply resources.

23 Only then will the Commission have a clear sense of the resources

1 available to North Carolina customers as well as the cost and scheduling
2 of those resources.

- 3 • Because of the strong likelihood that energy efficiency is available at lower
4 cost than the proposed nuclear station, the Commission should reiterate
5 the statement in its 2008 order to the effect that it will require a showing
6 that programs are in place to capture all cost-effective energy efficiency
7 before it accepts as prudent any decision to build a nuclear unit.

- 8 • Finally, the Commission should indicate in any decision granting a
9 prudence determination that it recognizes the reduced risk that will flow
10 from the decision and intends to adjust the allowed return on equity
11 accordingly. Shifting risk from investors to customers does not produce
12 real savings. It lowers the cost of capital used in building the plant by
13 increasing customer exposure to events whose cost might otherwise have
14 been borne by investors. If any of these events occur, the customers will
15 pay for them, and this risk offsets any savings from the reduced cost of
16 capital. The Commission should at least lower Duke Energy's return on
17 equity in order prevent the injustice of having customers pay investors as
18 if they were bearing the risks that have in fact been shifted to the
19 customers.

20 **Q. BUT SURELY A PROJECT AS EXPENSIVE AND COMPLEX AS A**
21 **NUCLEAR UNIT COULD NOT BE FINANCED WITHOUT ASSURANCE**
22 **THAT IT WILL RECOVER ITS COST, NO MATTER HOW UNECONOMIC?**

1 A. Size and complexity are not what makes a project unfinanceable. To take
2 just one example, the Trans-Alaska Pipeline, costing some \$7 billion in the
3 dollars of the 1970s and involving unprecedented construction challenges,
4 was built without conscripting capital from its customers before it went into
5 operation. Financing of large and complex projects is a regular occurrence.
6 What makes nuclear projects so hard to finance conventionally is not
7 expense and complexity but the risk that the project will cost too much to be
8 able to sell its output at a price that will recover the costs and provide a
9 return to investors.

10 Q. **ISN'T NUCLEAR POWER SO ESSENTIAL TO COMBATTING CLIMATE**
11 **CHANGES THAT THE COMMISSION SHOULD GRANT DUKE**
12 **ENERGY'S REQUESTS EVEN IN LIGHT OF THE RISKS TO ITS**
13 **CUSTOMERS?**

14 A. No. The 2007 Keystone Fact Finding Report in which Duke Energy
15 participated concluded that nuclear can contribute only modestly to reducing
16 climate change even if the world builds three times its existing nuclear
17 capacity over the next 50 years, an immense achievement that would
18 require increases in the rate of construction far beyond anything that now
19 seems likely. If nuclear power can be built cost effectively, this contribution
20 would make the climate change task easier. However, if nuclear is not cost
21 effective, it will take revenue and attention from other measures that can
22 prevent far more green house gas reductions far more quickly.

23

1 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

2 A. Yes.

1 Q. Sir, will you give a summary of your testimony?

2 A. Yes. Thank you very much for the opportunity to
3 appear today and for the scheduling decisions that
4 you've made.

5 My name is Peter A. Bradford. I live in
6 Peru, Vermont. I've chaired the Public Utility
7 Regulatory Commissions in Maine and New York. I
8 was also a Commissioner on the U.S. Nuclear
9 Regulatory Commission. Since 1995, I've taught
10 several courses related to energy policy, utility
11 regulation and nuclear power at Yale and at Vermont
12 Law School, as well as in seminar programs at the
13 Institute for Public Utilities and elsewhere. I
14 testified in this docket in April 2008, pointing
15 out a number of economic risks that have since
16 become realities.

17 My testimony advises the North Carolina
18 Utilities Commission not to grant Duke Energy's
19 application for approval of the decision to incur
20 another \$267 million in nuclear generation project
21 development costs between now and the end of 2013.

22 I point out that the fundamental reasons
23 that Duke Energy put forth to justify the Lee
24 project several years ago have been substantially

1 undermined by the events of the last three years.
2 Exposing North Carolina customers to costs
3 amounting to additional hundreds of dollars per
4 family can't be justified. Instead, the Commission
5 should rely on ratemaking approaches that restore
6 the traditional balance of risk between lenders and
7 customers, under which risks are assigned -- are
8 assumed by the companies and financial institutions
9 best able to assess and manage those risks.

10 In my testimony, I discuss Duke Energy's
11 declining need for power from the Lee units. The
12 reduced demand indicates that the customers need
13 not be financing units whose completion is a decade
14 or more beyond the date when customer bills begin
15 to reflect these increased costs.

16 Projected natural gas prices (and
17 therefore the cost of combinations of natural gas
18 and renewable energy resources) are significantly
19 lower now than was the case in 2008.

20 The so-called U.S. "nuclear renaissance"
21 was in shambles well before the tragic events still
22 unfolding in Japan. The statement in the Duke
23 Energy application that "interest in new nuclear
24 generation has increased in the United States over

1 the past several years" is incorrect. Most of the
2 projects that were said to constitute the
3 "renaissance" in 2008 have been canceled, suspended
4 or greatly delayed. One of the primary reasons is
5 the cost increases. The U.S. Energy Administration
6 recently increased its estimate of the cost of new
7 reactors by 37 percent.

8 The projected in service date for the
9 first Lee unit has slipped three years, from 2018
10 to 2021, then the second to 2023. Customers are no
11 closer to seeing electricity from the Lee units
12 than they were when I testified in 2008. However,
13 those customers are tens of millions of dollars
14 poorer. Now, with far less justification than
15 existed in 2008, Duke Energy is asking the
16 Commission to more than double customer exposure
17 both to cost and to risk.

18 As I did in 2008, I again urge the
19 Commission to cap any prudence determination at a
20 figure that does no more than maintain the current
21 state and value of the Lee project. No additional
22 customer money should go toward developing it under
23 present circumstances.

24 In addition, the Commission should

1 indicate a maximum acceptable cost for the Lee
2 project itself. Such a determination need not be
3 binding at this time, but it would provide useful
4 guidance to Duke Energy and to its customers alike
5 that the sky is not the limit where the Lee project
6 is concerned. Given the instability in nuclear
7 construction cost projections, a firm cap on costs
8 is likely to be needed to protect customers from
9 cost overruns and cancellations over the next
10 decade as well.

11 Also, the Commission should revisit its
12 determination that payments to manufacturing
13 facilities in Japan to secure the long lead time
14 items are project development costs. There's no
15 urgency requiring the payment of large sums to hold
16 a place in line at overseas factories until North
17 Carolina has a much clearer picture of which, if
18 any, new reactors are actually going to get built.

19 In addition, a consolidation of nuclear
20 projects in the southeast, together with a
21 reshuffling of the ownership interest in those
22 projects, seems very likely. The proposed
23 Duke/Progress merger is one potential pathway to
24 this result. It's not at all clear that the Lee

1 units will survive this process. If they do, it's
2 also not clear that new owners will be required to
3 shoulder a share of the cost burdens already
4 assumed by the existing customers. This issue will
5 raise serious fairness questions if some companies
6 are permitted to charge large costs to captive
7 customers, only later to sell shares of the plant
8 to buyers who will want to pay market-based prices
9 rather than to make the captive customers whole.

10 Failing costs of alternatives make it
11 more urgent now than in 2008 that the Commission
12 requires Duke Energy to use a competitive power
13 procurement process to screen possible power supply
14 resources. In addition, because of the strong
15 likelihood that energy efficiency is available at
16 lower cost than the proposed nuclear station, the
17 Commission should reiterate the statement in its
18 2008 order to the effect that it will require a
19 showing that programs are in place to capture all
20 cost-effective energy efficiency before it accepts
21 as prudent any decision to build a nuclear unit.

22 Finally, the Commission should indicate
23 in any decision granting a prudence determination
24 that it recognizes the reduced risk that will flow

1 from the decision and intends to adjust the allowed
2 return on equity accordingly. Shifting risk from
3 investors to customers does not produce any real
4 savings. It lowers the cost of capital used in
5 building the plant by increasing customer exposure
6 to events whose cost might otherwise have been
7 borne by investors. If any of these events occur,
8 the customers will pay for them, and this risk
9 offsets any savings from the reduced cost of
10 capital. The Commission should at least lower Duke
11 Energy's return on equity in order to prevent the
12 injustice of having customers pay investors as if
13 the investors were bearing the risks that have, in
14 fact, been shifted to the customers.

15 That concludes my summary.

16 MR. RUNKLE: The witness is available for
17 cross examination.

18 CHAIRMAN FINLEY: Mr. Green or Ms.
19 Rankin, either one.

20 CROSS EXAMINATION BY MR. GREEN:

21 Q. Good morning, Mr. Bradford.

22 A. Good morning.

23 Q. On this side over here. I'm Len Green with the
24 North Carolina Attorney General's office.

1 A. Nice to see you.

2 Q. On page 6 of your testimony, you state, starting on
3 line 15, that most of the projects that were said
4 to constitute the renaissance in 2008 have been
5 canceled, suspended or greatly delayed. Can you
6 provide the Commission with any specifics about
7 what those utilities are doing as a substitute for
8 the nuclear projects that they've canceled or
9 delayed?

10 A. Let's see. From memory, Exelon has canceled its
11 Victoria County project in Texas and converted the
12 application into an early site permit request,
13 which means that it is in no way committed to going
14 forward, but if such a permit were granted, would
15 have the site deemed suitable for a nuclear plant,
16 a permit that would then be good for 20 years. The
17 Ameren project in Missouri may be continuing in the
18 licensing process, but the utilities announced that
19 it has no intention of going forward with the
20 project itself unless Missouri is prepared to grant
21 construction work in progress treatment.
22 Constellation is withdrawn from the Calvert Cliffs
23 project in Ireland. Its partner, EDF, purports to
24 be interested still in continuing with it, but they

1 have been searching for someone willing to step up
2 and take Constellation's 50 percent share and have
3 not found anyone. They can't continue it on their
4 own because they're a foreign-owned corporation.
5 The NRG project in Texas continues to search for
6 partners to fill a roughly 43 percent ownership
7 share. San Antonio yesterday announced that they
8 were no longer in discussions with NRG about taking
9 a partial ownership. Let's see. A number of the
10 other suspended projects -- I'm thinking of Nine
11 Mile Point in New York, Bell Bend in Pennsylvania,
12 are simply going nowhere. The applications may
13 still sit at the Nuclear Regulatory Commission, but
14 the applicants are not taking any steps to further
15 the project. That would also be true of the
16 project in Mississippi, Louisiana, at least of the
17 TBA reactors.

18 Q. On page 12 of your testimony, you state, beginning
19 on line 3, that at this point, there's little
20 chance that the Lee project can produce
21 competitively priced electricity without, or even
22 with, a federal loan guarantee, which it has no
23 immediate prospect of receiving one. What's the
24 basis for your statement there?

1 A. Well, there are two statements, that it has no
2 immediate prospect of receiving a federal loan
3 guarantee. I don't know whether Duke applied for a
4 loan guarantee, but it's not on the final four.
5 Those are Vogtle, South Texas, South Carolina and
6 Calvert Cliffs in Maryland. There's only \$10
7 billion left in loan guarantee, I mean, at the
8 moment.

9 Q. So those final four would be likely the only four
10 that will get the loan guarantee?

11 A. There isn't enough money, even, for all four of
12 them. Yes. There's no prospect of anyone beyond
13 those four getting a loan guarantee unless one or
14 more of those four would cancel outright and
15 someone else moves up, but that's not going to be a
16 rapid process. It's been a year since the first
17 and only loan guarantee was granted.

18 The basis for the other part of the
19 statement, that the project has no prospect of
20 producing economically competitive electricity, is
21 that I haven't seen a close estimate, even an
22 industry cost estimate, for the likely price of
23 nuclear power from a new unit without a loan
24 guarantee that was under roughly 12 cents a kWh.

1 And, certainly, there are estimates that are higher
2 at today's power market prices in the parts of the
3 country that use competitive power procurement.
4 Wholesale kWh have been in the 4 to 5 cent kWh
5 range. And if you use the EIA projected price of
6 natural gas, which tends to determine that power
7 market price, you don't see it going above
8 something on the order of 7 to 8 cents a kWh, out
9 as far as the EIA price estimates extend, which is
10 in the 2030, 2035 range. The CEO of Exelon's
11 chart, that is my Appendix B, gave a talk last week
12 in which he said essentially the same thing,
13 there's just no way that nuclear power can run
14 competitive with -- sorry -- no way that nuclear
15 power can charge a price in competitive markets
16 that would produce acceptable returns, and his
17 company has no interest in going forward with
18 nuclear power projects for the foreseeable future.

19 Q. And on page 12 of your testimony, you also state,
20 beginning at line 11, that "This issue will raise
21 serious fairness questions if some companies are
22 permitted to charge large cost to captive
23 customers, only later to sell shares of the project
24 or the plant to buyers who will want to pay market-

1 based rates rather than make captive customers
2 whole." So your testimony there is concerned with
3 a partnership, perhaps the example being the
4 Jacksonville Electrical Authority, that might get
5 some sort of bargain on the final cost of their
6 share of the plant at the expense of captive
7 ratepayers? Is that your --

8 A. Well, conceptually, that's one possibility. I
9 mean, I guess I wouldn't use the word bargain.
10 They would want to pay the market price as of the
11 time that they bought in. I mean, their
12 willingness to buy in would be based on what they
13 saw as being the price of alternatives to them.
14 Another possibility would be power purchase
15 agreements, obviously. But the fundamental concern
16 is at that point, the Duke customers would be in
17 the position of having paid the CWIP-based rates
18 for 100 percent of the project, but they would not
19 in the end be receiving 100 percent of the power.
20 Some of it would be going to others who would not
21 be assuming those -- the past payments made by the
22 Duke customers.

23 Q. In pricing their sell electricity from the Lee
24 plant or some share of the Lee plant, wouldn't Duke

1 take into consideration the risk that they had
2 borne or their customers had borne in building the
3 plant and the future operation of the plant?

4 A. Well, they would certainly, I assume, ask a price
5 that they considered to be fully compensatory, but
6 the price that the buyer would be willing to pay
7 would not be determined by their sense of fairness
8 to Duke's customers; it would be determined by the
9 cost of alternatives in the market as they saw it
10 at the time.

11 MR. GREEN: Thank you, Mr. Bradford.
12 Those are all my questions.

13 CHAIRMAN FINLEY: All right. Ms. Rankin?

14 MS. RANKIN: I have no questions.

15 CHAIRMAN FINLEY: Duke?

16 CROSS EXAMINATION BY MS. SHAFEEK-HORTON:

17 Q. Good morning. I'm Timika Shafeek-Horton for Duke
18 Energy.

19 A. Good morning.

20 Q. On page 7, lines 11 through 13 of your testimony,
21 you say that "The three-year delay in the projected
22 completion, long before construction has begun,
23 demonstrates that the nuclear industry remains
24 subject to unforeseen major delays," correct?

1 A. Correct.

2 Q. Are you aware that the delay in Duke's commercial
3 operation date is not due to factors related to the
4 nuclear industry, but is instead related to factors
5 not related to the industry, such as the impact of
6 the recession?

7 A. I'm aware that the delay -- reasons for delay
8 include the impact of the recession. I think that
9 there's an interplay between the recession, the
10 cost of building a new nuclear plant, the demand
11 for the output of the new nuclear plant, so I
12 quibble a little with your saying that it was
13 utterly unrelated to the characteristics of a
14 nuclear plant, but I'll agree with you that it is -
15 - that the recession is certainly one of the
16 causes.

17 Q. Well, I suppose, then, can you specifically point
18 to something related to the nuclear industry that
19 relates to Duke's delay of its COD?

20 A. Well, a nuclear plant has some unique
21 characteristics compared to other forms of
22 generation, compared also to energy efficiency.
23 Those include its very high capital costs and its
24 long lead times. That will mean that it will have

1 a different interaction with events like a
2 recession, like increased cost of money, like drop-
3 offs in demand, that would not necessarily be the
4 case for a generating source that was less
5 expensive to build or that could be built in
6 smaller increments. So the point over which you
7 and I are differing is that I'm saying there are
8 nuclear characteristics that are relevant that you
9 have to take into consideration in considering the
10 impact of the recession, and I point to those
11 characteristics in answering your question about
12 the nuclear aspects.

13 Now, of course, it's too early to say
14 whether events unfolding in Japan, which are
15 genuinely nuclear in nature, will produce further
16 reshufflings of the deck for all of the pending
17 plants in the U.S.

18 Q. On pages 6 and 9 of your written testimony, you
19 speak to cost overruns and rising costs associated
20 with new nuclear. Is that right?

21 A. Yes.

22 Q. Are you familiar with the SCE&G -- excuse me --
23 with SCE&G's development of two nuclear units near
24 Columbia, South Carolina?

1 A. I know that that project is going -- is one of the
2 applications pending at the NRC, but I haven't
3 studied it in any detail.

4 Q. Well, are you aware that the AP1000 design that
5 Duke has chosen is the same design that SCE&G has
6 chosen for its nuclear units?

7 A. Yes.

8 Q. Are you also aware that as of October 21st of 2010,
9 South Carolina Electric & Gas reported to the
10 Public Service Commission of South Carolina that
11 its project at that point was on time and under
12 budget, and approximately 70 percent of the costs
13 were considered firm?

14 A. I remember the on time and under budget. I don't
15 recall the 70 percent of the costs being considered
16 firm. The problem with the phrase "under budget,"
17 though, as it's being used in the industry today,
18 is that under budget doesn't help very much if
19 being on budget means that the power is twice as
20 expensive as that from alternative sources. It
21 would be more reassuring if they were saying that
22 the project was on time and would come into service
23 at a competitive price per kWh.

24 Q. But as far as you know, the statement that I made

1 is accurate?

2 A. Yes.

3 Q. On pages 5 and 6 of your testimony, you speak to
4 the current low prices of gas. Is that right?

5 A. Yes.

6 Q. Did you know that within the last 10 years, gas
7 prices have been as high as 18 MM/BTU, \$18.00 per
8 MM/BTU?

9 A. I know that they have been much higher than they
10 are now. I don't remember the peak.

11 Q. What proof do you have that gas prices will stay
12 within the price range that they are in today?

13 A. Only the forecasts of EIA and other impartial
14 evaluators who make such forecasts.

15 Q. And those are forecasts. We can't be certain,
16 though. Isn't that right?

17 A. That's right. They're all forecasts of future
18 costs, nuclear, gas, energy efficiency, demand.

19 Q. Are you aware that if the Commission grants the
20 Company's request, as described in our application,
21 that there will be no immediate impact on rates?

22 A. I'm aware that rates would not increase as a result
23 solely of the granting of this request, yes.

24 MS. SHAFEEK-HORTON: Thank you. I have

1 no further questions.

2 CHAIRMAN FINLEY: Redirect, Mr. Runkle?

3 REDIRECT EXAMINATION BY MR. RUNKLE:

4 Q. Mr. Bradford, just in response to the question
5 about the natural gas prices, you mentioned EIA.

6 Can you describe what EIA is?

7 A. EIA is the Energy Information Administration, which
8 is the part of the Department of Energy that makes
9 regular forecasts as to future prices of various
10 energy sources and that also gathers and publishes
11 a great deal of other data relating to energy
12 supply and energy cost.

13 Q. Do you find their forecasts to be reliable?

14 A. They're no worse than any other forecasts, you
15 know. Forecasts aren't destiny, and one has to
16 attach uncertainty bands to them.

17 Q. And the final question about that there would be no
18 impacts on rates if the Commission granted Duke's
19 request, at what point would rates be impacted by
20 predevelopment costs from the Lee station?

21 A. Well, by these predevelopment costs, the rates
22 would be impacted at such time as the Commission
23 approved their inclusion, but the rates are already
24 being impacted by predevelopment costs of the Lee

1 station from years past.

2 MR. RUNKLE: No further questions.

3 CHAIRMAN FINLEY: All right. Thank you,
4 Mr. Bradford. We appreciate your coming today.

5 THE WITNESS: Thank you.

6 CHAIRMAN FINLEY: We will admit his two
7 appendices into the evidence, please.

8 (PUBLIC ADVOCACY GROUPS' BRADFORD APPENDICES

9 A AND B WERE ADMITTED INTO EVIDENCE.)

10 MR. RUNKLE: Are there any questions from
11 the commissioners?

12 CHAIRMAN FINLEY: Are there questions
13 from the Commission? Excuse me. Mr. Bradford, I
14 have jumped the gun here. If you'll have a seat.
15 Commissioner Joyner has a question. I apologize.

16 COMMISSIONER JOYNER: Thank you, Mr.
17 Chairman.

18 EXAMINATION BY COMMISSIONER JOYNER:

19 Q. Good morning, Mr. Bradford. It's nice to see you
20 again.

21 A. Good morning.

22 Q. I wanted to follow up on a line of questions that
23 you discussed with Mr. Green from the Attorney
24 General's Office. You were talking to him about

1 the nuclear renaissance and the support for your
2 statement that things had changed appreciably since
3 then. In the course of that conversation, you
4 referred to the fact that Duke Energy was not in
5 the final four. Do you know how far down in the
6 queue Duke is?

7 A. I don't know. And, in fact, I don't even know for
8 sure that they applied for a loan guarantee.

9 Q. With respect to the --

10 A. I can tell you that I don't think their in fifth
11 place, though, because -- I don't remember who is,
12 but there is some would-be builder of a nuclear
13 plant that has said that they would expect to step
14 up if one of the top four were to cancel. I don't
15 think that was Duke, but it's a vague memory.
16 You'll have witnesses coming up shortly who will
17 know for sure.

18 Q. You also said to Mr. Green that it had been a year
19 since the first federal loan guarantee had been
20 awarded. Do you recall to whom that guarantee was
21 granted and the amount?

22 A. It was to the Southern company and other builders
23 of the Vogtle units in Georgia, and it was, I
24 believe, a .3 billion -- certainly, a billion and

1 some additional hundreds of million.

2 Q. Thank you. My final question has to do with one of
3 your recommendations to the Commission. You asked
4 us to cap any prudence determination at a figure
5 that does no more than maintain the current state
6 and value of the Lee project. Are you in a
7 position to offer any guidance as to what that cap
8 ought to be, what that figure is?

9 A. You know, I was thinking this morning about that
10 very question, and I don't have any guidance as to
11 a number. What I was asking myself was how, if I
12 were sitting in your position, I'd go about
13 determining it, and I think the first thing I'd do
14 would be to put the onus back on Duke. If we
15 decided to do that, what do we need to consider in
16 terms of contractual obligations and what it would
17 take to bring the project basically to a standstill
18 without completely canceling it and walking away
19 from it, because they're the ones in the best
20 position to know that.

21 I'd say the other thought I had in
22 thinking about that was that one doesn't want to
23 act precipitously, but with events unfolding in
24 Japan and the economic implications of those events

1 -- I don't want to take this off into the health
2 and safety area, but just the additional
3 perceptions of risk on the part of those who are
4 going to be in charge of putting up money, the
5 inevitable reviews by the Nuclear Regulatory
6 Commission of the lessons to be learned from that.
7 I was on the NRC during Three Mile Island, so I
8 know the year, year and a half of study that went
9 into various modifications of licensing
10 requirements and emergency planning requirements
11 that came out of that. Nuclear power is not going
12 to get cheaper as a result of what we're seeing
13 now, and there's a pretty high likelihood of cost
14 increases. Given the unfavorable economic profile
15 that this project seems to me to have already, I'd
16 be more inclined now than I was when I wrote those
17 words to think that maybe it's just time to pack it
18 in and then not worry so much about preserving the
19 value that's in it.

20 COMMISSIONER JOYNER: Thank you. That's
21 all I have, Mr. Chairman.

22 CHAIRMAN FINLEY: Other questions from
23 the Commission?

24 (No response.)

1 CHAIRMAN FINLEY: Questions by the
2 parties on the Commission's questions?

3 MS. SHAFEEK-HORTON: No.

4 CHAIRMAN FINLEY: Then I think now, Mr.
5 Bradford, we'll excuse you. Thank you. All right.
6 Let's take 15 minutes as our mid-morning break, and
7 we'll be back at 10 after 11:00.

8 (RECESS TAKEN FROM 10:55 A.M. UNTIL 11:10 A.M.)

9 MR. RUNKLE: May counsel approach the
10 bench?

11 CHAIRMAN FINLEY: Yes. Counsel approach
12 the bench, please.

13 (OFF-THE-RECORD DISCUSSION)

14 CHAIRMAN FINLEY: All right. Duke?

15 MS. SHAFEEK-HORTON: Duke Energy
16 Carolinas would call Jim Rogers.

17 (WHEREUPON, JIM ROGERS WAS CALLED AS A WITNESS,
18 DULY SWORN, AND TESTIFIED AS FOLLOWS:)

19 DIRECT EXAMINATION BY MS. SHAFEEK-HORTON:

20 Q. Please state your name for the record.

21 A. Jim Rogers.

22 Q. And by whom are you employed and what is your
23 title?

24 A. I'm employed by Duke Energy, and I am Chairman,

1 President, CEO.

2 Q. Did you cause to be filed in this docket 12 pages
3 of direct testimony, six pages of supplemental
4 testimony, and nine pages of rebuttal testimony?

5 A. Yes, ma'am. I did.

6 Q. If I were to ask you the same questions today that
7 were asked in your testimony, if I asked you those
8 questions today on the stand, would your answers be
9 the same?

10 A. Yes, they would.

11 MS. SHAFEEK-HORTON: At this time I would
12 ask that the testimony, as prefiled, be entered
13 into the record as if given orally from the stand.

14 CHAIRMAN FINLEY: All right. Mr. Rogers'
15 direct -- prefiled direct testimony, supplemental
16 testimony and rebuttal testimony shall be copied
17 into the record as though given orally from the
18 stand.

19 (THE PREFILED DIRECT, SUPPLEMENTAL AND
20 REBUTTAL TESTIMONY OF JAMES ROGERS WILL
21 BE COPIED INTO THE RECORD AS IF GIVEN
22 ORALLY FROM THE WITNESS STAND.)

I. INTRODUCTION AND PURPOSE

1 **Q. PLEASE STATE YOUR NAME, ADDRESS AND POSITION WITH DUKE**
2 **ENERGY CORPORATION.**

3 **A. My name is James E. Rogers, and my business address is 526 South Church**
4 **Street, Charlotte, North Carolina. I am Chairman, President, and Chief Executive**
5 **Officer ("CEO") of Duke Energy Corporation ("Duke Energy"). Duke Energy**
6 **Carolinas, LLC ("Duke Energy Carolinas" or the "Company") is a subsidiary of**
7 **Duke Energy.**

8 **Q. PLEASE DESCRIBE BRIEFLY YOUR EDUCATIONAL AND**
9 **PROFESSIONAL EXPERIENCE.**

10 **A. I received a Bachelor's Degree in Business Administration (1970) and law degree**
11 **(1974) from the University of Kentucky. Prior to assuming my current position at**
12 **Duke Energy in April 2006, I was Chairman and Chief Executive Officer of**
13 **Cinergy Corp. ("Cinergy"). I helped create Cinergy in 1994 through the merger**
14 **of PSI Resources, Inc. ("PSI Resources"), the parent company of PSI Energy,**
15 **Inc., ("PSI Energy") and The Cincinnati Gas & Electric Company. Prior to the**
16 **formation of Cinergy, I was Chairman and Chief Executive Officer of PSI**
17 **Resources and PSI Energy.**

18 **Before joining PSI Resources in October 1988 as Chief Executive Officer,**
19 **I was Executive Vice President of the gas pipeline group of Enron Corp.**
20 **("Enron"), and President of Enron's interstate natural gas pipeline companies**
21 **from 1985 to 1988. From 1979 to 1981 and from 1983 to 1985, I was in private**
22 **law practice in Washington, D.C., with the law firm of Akin, Gump, Strauss,**

1 Hauer & Feld. During that time, I represented natural gas pipelines, gas
2 producers, and electric utilities before the Federal Energy Regulatory Commission
3 ("FERC") and various federal courts. From 1981 to 1983, I was deputy general
4 counsel for litigation and enforcement at the FERC. In that position, I directed
5 the FERC's litigation efforts in cases involving electric rates, hydroelectric
6 licensing, gas producer and gas pipeline rates. I began my career with the
7 Kentucky Attorney General's office, representing consumer interests in utility
8 cases.

9 **Q. PLEASE DESCRIBE YOUR PROFESSIONAL AFFILIATIONS.**

10 **A.** I am the immediate past Chairman for and served on the Executive Committee of
11 the Edison Electric Institute. I also serve on the boards of the American Gas
12 Association, U.S. Chamber of Commerce, Business Roundtable, and the National
13 Coal Council. I am Co-Chair of the Energy Efficiency Action Plan Leadership
14 Group (the "Leadership Group"), formed by the U.S. Department of Energy and
15 the U.S. Environmental Protection Agency ("EPA") and approximately fifty
16 leading electric and gas utilities, state utility commissioners, state air and energy
17 agencies, energy service providers, energy consumers, and energy efficiency and
18 consumer advocates. The Leadership Group was formed to drive an aggressive
19 new national commitment to energy efficiency. I am a Director of Fifth Third
20 Bancorp and Cigna Corporation. I also am a member of the boards of directors of
21 the Nuclear Energy Institute, the Institute of Nuclear Power Operations, the
22 Alliance to Save Energy, and the Nicholas Institute for Environmental Policy
23 Solutions at Duke University.

1 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

2 A. The purpose of my testimony is to support Duke Energy Carolinas' Amended
3 Application for Approval of Decision to Incur Nuclear Generation Project
4 Development Costs (the "Amended Application"). As part of this Amended
5 Application, Duke Energy Carolinas is seeking approval of its decision to incur
6 total development costs of \$459 million through December 31, 2013, for the
7 Company's proposed William States Lee, III Nuclear Station to be located in
8 Cherokee County, South Carolina ("Lee Nuclear Station"). The North Carolina
9 allocable portion of these total development costs is approximately 68%.

10 I will discuss and emphasize the importance of the requested approval to
11 Duke Energy Carolinas. I will also discuss the importance of the proposed Lee
12 Nuclear Station to our strategic plans to meet customers' needs for reliable, clean
13 and cost-effective electricity while modernizing our fleet, increasing diversity
14 among our generation resources and reducing our environmental footprint.

15 In addition to my testimony, Dhiaa Jamil, Duke Energy's Chief
16 Generation Officer and Chief Nuclear Officer for Duke Energy Carolinas, testifies
17 to the status of ongoing development work and estimated costs for the Lee
18 Nuclear Station. Janice Hager, Vice President, Integrated Resource Planning and
19 Regulated Analytics for Duke Energy, also testifies regarding the most recent
20 integrated resource planning analysis that supports the continued development of
21 Lee Nuclear Station.

22

II. RATIONALE FOR PURSUING LEE NUCLEAR STATION

1 **Q. WHY IS DUKE ENERGY CAROLINAS CONTINUING THE**
2 **DEVELOPMENT OF LEE NUCLEAR STATION?**

3 **A. Duke Energy Carolinas has an obligation to plan for and meet our customers'**
4 **energy needs, and we must do so reliably and cost-effectively in the face of an**
5 **uncertain future. Lee Nuclear Station will provide significant value to our**
6 **customers in the face of the uncertainties posed by future economic,**
7 **environmental, regulatory, and operating circumstances, and, as such, it is prudent**
8 **for us to continue the necessary development activities to obtain the Combined**
9 **Construction and Operating License ("COL") for Lee expected in 2013.**

10 **Q. WHAT ROLE DOES THE DEVELOPMENT OF THE LEE NUCLEAR**
11 **STATION PLAY IN DUKE ENERGY CAROLINAS' STRATEGIC PLANS**
12 **TO MEET CUSTOMER NEEDS?**

13 **A. Duke Energy Carolinas has developed a strategic plan to meet sustained customer**
14 **load growth while maintaining prudent flexibility to respond to dynamic**
15 **regulatory, environmental and operating circumstances. Lee Nuclear Station is a**
16 **key component of Duke Energy Carolinas' comprehensive modernization plan,**
17 **which also includes increased energy efficiency and demand-side management**
18 **programs, renewable energy resources, new natural gas resources, and the**
19 **advanced clean coal Cliffside Unit 6. The number of customers the Company**
20 **serves continues to grow. As Company Witness Janice Hager discusses in her**
21 **testimony, the recently-filed 2010 Integrated Resource Plan demonstrates that**
22 **Duke Energy Carolinas has a cumulative need for approximately 2,200 MW of**

1 new generation capacity by 2020, which grows to approximately 6000 MW by
2 2030.

3 In addition to meeting our customers' growing energy needs, the
4 Company must also consider a changing regulatory landscape. At present, almost
5 40% of Duke Energy Carolinas' energy is produced from coal resources; the
6 Company's fleet of generating facilities simply must change along with the
7 evolving environmental, legal and regulatory constraints. As part of the
8 Company's commitments in Docket No. E-7, Sub 790, and as part of the
9 approved Energy Efficiency Plan in Docket No. E-7, Sub 831, Duke Energy
10 Carolinas will retire approximately 1,667 MW of older, less-efficient coal units as
11 new energy efficiency savings are achieved and the new advanced clean coal
12 Cliffside Unit 6 is added to our fleet. The Company also anticipates retiring all of
13 its older coal generation resources that do not have installed flue gas
14 desulfurization facilities by 2015 due to the anticipated impact of a series of new
15 proposed U.S. Environmental Protection Agency ("EPA") rules regulating
16 multiple areas relating to generation resources. In sum, Duke Energy Carolinas
17 will be retiring approximately 1,667 MWs of coal generation resources within the
18 next 5 years.

19 **Q. HAS THE COMPANY'S PLANNED COMMERCIAL OPERATION DATE**
20 **FOR LEE NUCLEAR STATION CHANGED SINCE THE ORIGINAL**
21 **APPLICATION?**

22 **A. Yes.** On September 1, 2009, the Company notified the Nuclear Regulatory
23 Commission that a commercial operation date ("COD") of 2021 is more

1 appropriate than the 2018 date originally sought by the Company in its Combined
2 Construction and Operating License Application filed on December 13, 2007 (the
3 "COLA") and included in the Application in this docket. This decision was based
4 on our internal resource planning process which includes analyses of various data
5 and management's perspective on and interpretation of the data. Company
6 Witness Hager provides more details regarding the resource planning process.

7 **Q. WHY IS DUKE ENERGY CAROLINAS SEEKING APPROVAL OF ITS**
8 **DECISION TO INCUR ADDITIONAL DEVELOPMENT COSTS FOR**
9 **THE PERIOD JANUARY 1, 2010, THROUGH DECEMBER 31, 2013?**

10 **A.** The Company anticipates receiving the COL from the Nuclear Regulatory
11 Commission by December 31, 2013. Consequently, the Company seeks to obtain
12 approval of its decision to incur costs through that date. Nuclear generation
13 facilities have a very long lead time and, as described in the testimony of Witness
14 Dhiaa Jamil, there is still a great deal of development work to be done and costs
15 to be incurred to meet the 2021 COD set forth in the Company's COLA. The
16 Company cannot obtain the COL in 2013 to support the 2021 COD without
17 incurring total costs of up to \$459 million. Also, in 2007, the legislatures in both
18 North Carolina and South Carolina passed legislation that expressly provides for
19 commission approval of a utility's decision to incur nuclear project development
20 costs. The legislation also provides additional assurance for recovery of nuclear
21 financing costs during construction. The Company believes that the assurances
22 sought by this Amended Application are consistent with those laws and the
23 Commission's prior orders in this matter.

1 Q. WHY IS NUCLEAR THE RIGHT CHOICE GIVEN THE CURRENT
2 STATE OF CARBON LEGISLATION AND CLEAN ENERGY
3 STANDARDS?

4 A. New nuclear resources are necessary for Duke Energy Carolinas to meet its
5 customers' electricity needs over the long term despite the uncertain future of
6 carbon legislation. The Company has an aging fleet of generation resources, with
7 the average age of its plants being over 40 years old. New nuclear facilities offer
8 significant benefits from a system planning perspective, as they operate at base
9 load capacity factors and provide carbon emission-free energy for over half a
10 century. Such resources provide a reliable operational foundation for the
11 Company's system for a generation. In terms of costs, over the long term
12 horizon, nuclear costs, particularly the fuel costs, are relatively low as compared
13 to the costs of coal or natural gas facilities. Duke Energy Carolina's current
14 nuclear fleet provides over 5000 MWs of capacity and approximately 50% of the
15 energy our customers consume. Due in part to the relatively low costs associated
16 with operation of the Company's nuclear facilities, Duke Energy Carolina's retail
17 customers enjoy rates that are 20% to 30% lower than the national average. Low
18 electricity rates give our region a competitive advantage in attracting new jobs
19 and businesses. Ultimately, this benefits our customers.

20 Even in the absence of carbon legislation, Duke Energy Carolinas must
21 modernize and de-carbonize its resource options over the coming decades to
22 retain its ability to provide affordable, reliable and clean electricity to all of its
23 customers. No matter what form it ultimately takes, stringent regulation of carbon

1 and other emissions will occur; to ignore this fact would be entirely unreasonable.
2 To attempt to meet all aspects of the affordable, reliable and clean energy goals,
3 the Company must retain and enhance the diversity of its generation resource
4 portfolio. A single resource type is not the answer; rather, a combination of
5 resources, including new nuclear, natural gas, energy efficiency and demand side
6 management programs, renewables, and advanced coal, must be collectively
7 incorporated over time to balance risk, reliably meet demand, reduce carbon and
8 other pollutant emissions, and minimize costs to customers.

9 **Q. HOW DOES THE SUPPLY AND COST OF NATURAL GAS FACTOR**
10 **INTO THE DECISION TO CONTINUE THE DEVELOPMENT OF LEE?**

11 **A.** The Company is taking a measured approach with respect to the evolving market
12 for natural gas. At present, natural gas prices are at very low levels and such
13 prices have been forecasted to remain low over the near term. However, natural
14 gas, as a commodity, has historically been subject to significant volatility in
15 pricing, even during periods of robust supply. Questions remain regarding access
16 to the new domestic reserves of shale natural gas that are driving the new supply
17 estimates. Consequently, uncertainty exists regarding natural gas availability and
18 pricing over the long term. I believe additional time and evaluation are necessary
19 to assess the true achievable potential and market impact of the newly-discovered
20 domestic shale gas reserves.

21 Notwithstanding the foregoing, natural gas will certainly play a role in
22 Duke Energy Carolinas' resource mix in the future and is part of the equation to
23 meet customer needs over the long term. One need only look to the Company's

1 construction of its Buck and Dan River combined cycle facilities to see the
2 increased importance of natural gas to the generation portfolio. However, I must
3 emphasize that natural gas resources, like new nuclear resources, are only a part
4 of the diversified future energy mix necessary for Duke Energy Carolinas to
5 provide affordable, reliable and clean electricity to its customers over the coming
6 decades.

7 **Q. WHAT IS THE STATUS OF JOINT OWNERSHIP OPPORTUNITIES**
8 **FOR LEE NUCLEAR STATION?**

9 **A.** At present, Duke Energy Carolinas is independently developing Lee Nuclear
10 Station. Duke Energy Carolinas continues to assess opportunities for joint
11 ownership or financial arrangements that could be beneficial to its customers.
12 Duke Energy Carolinas strongly believes in the idea of regional generation
13 whereby multiple companies come together to build nuclear plants in order to
14 share risk and smooth out the rate impact to customers. As such, the Company
15 continues to explore various partnership options, which would provide
16 opportunities to share construction, project management, and operational risks,
17 and provide tangible benefits to Duke Energy Carolinas' customers. This
18 approach provides the advantage of adding capacity in smaller increments over
19 time to better match load growth and planned retirements and lessens the cost
20 recovery, collections, and cash flow impacts. Duke Energy Carolinas will update
21 the Commission if there are any developments regarding joint ownership
22 decisions for the Lee Nuclear Station, but the Company is well-positioned to

1 move forward on this project independently and can support the need for its full
2 capacity.

III. CONCLUSION

3 Q. WHY DOES DUKE ENERGY CAROLINAS BELIEVE THAT THE
4 COMMISSION SHOULD GRANT ITS AMENDED APPLICATION?

5 A. For all the reasons discussed in my testimony and those of Duke Energy
6 Carolinas' other witnesses, the continued development of Lee Nuclear Station is
7 valuable and important for our customers. We believe that the decision to incur
8 total project development costs of up to \$459 million through December 31, 2013
9 is prudent and reasonable. The approval sought by this Amended Application
10 will provide needed additional assurance that Lee Nuclear Station will continue to
11 be an option to serve Duke Energy Carolinas' customers in the 2021 timeframe.

12 Q. DOES THE COMMISSION'S APPROVAL OF DUKE ENERGY
13 CAROLINAS' REQUEST IN THIS AMENDED APPLICATION
14 PRECLUDE ADDITIONAL REGULATORY OVERSIGHT OF
15 CONSTRUCTION COSTS AND FURTHER PRUDENCE REVIEWS BY
16 THE COMMISSION?

17 A. No. The sole issue to be decided in this proceeding is whether the Commission
18 agrees with Duke Energy Carolinas that it is prudent to continue to incur project
19 development costs related to Lee Nuclear Station. At this time, Duke Energy
20 Carolinas is not asking the Commission to make a determination with respect to
21 recovery of the dollars spent on developing Lee. Thus, if the Commission grants
22 this request, there will not be an immediate cost impact to customers. The

1 Commission will retain significant oversight over the project development
2 process and there will be ample opportunity for other parties, the Public Staff, and
3 the Commission to review and dispute future costs related to both construction
4 and the project development.

5 **Q. DOES THIS COMPLETE YOUR PRE-FILED DIRECT TESTIMONY?**

6 **A. Yes, it does.**

1 Q. PLEASE STATE YOUR NAME, ADDRESS AND POSITION WITH DUKE
2 ENERGY CORPORATION.

3 A. My name is James E. Rogers, and my business address is 526 South Church Street,
4 Charlotte, North Carolina. I am Chairman, President, and Chief Executive Officer
5 ("CEO") of Duke Energy Corporation ("Duke Energy"). Duke Energy Carolinas, LLC
6 ("Duke Energy Carolinas" or the "Company") is a subsidiary of Duke Energy.

7 Q. HAVE YOU PREVIOUSLY FILED DIRECT TESTIMONY SUPPORTING THE
8 AMENDED APPLICATION IN THIS DOCKET?

9 A. Yes.

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

11 A. The purpose of my supplemental testimony is to update the North Carolina Utilities
12 Commission ("the Commission") on the status of partnership opportunities for Duke
13 Energy Carolinas relating to the William States Lee Nuclear Station ("Lee Nuclear" or
14 "the Project"). On February 1, 2011, the Company entered into an option agreement
15 ("Agreement") with JEA, a municipally-owned electrical utility serving the City of
16 Jacksonville, Florida, that grants JEA the option to purchase a portion of the Lee Nuclear
17 project at a future point in time. In exchange for the option, JEA has agreed to pay Duke
18 Energy Carolinas \$7.5 million. The execution of this Agreement is yet another step
19 forward in the development of the Project and provides further evidence of Duke Energy
20 Carolinas' commitment to regional nuclear generation and its commitment to prudently
21 manage the risk profile of this important and necessary project for its customers.

1 Q. PLEASE DESCRIBE THE OPTION AGREEMENT WITH JEA.

2 A. Under the Agreement, Duke Energy Carolinas has granted JEA an option to purchase an
3 undivided ownership interest in, at JEA's discretion, at least five percent (5%) and no
4 more than twenty percent (20%) of the Project. JEA may exercise that option during a
5 specified period of time after Duke Energy Carolinas (1) negotiates and executes an
6 Engineering, Procurement and Construction ("EPC") Agreement; (2) negotiates and
7 executes the Ownership and Development Agreement; (3) negotiates and executes the
8 Operating and Maintenance Agreement; and (4) receives the Combined Operating and
9 Construction License ("COL") from the U.S. Nuclear Regulatory Commission ("NRC")
10 for the Project. At such time, Duke Energy Carolinas will notify JEA that it is moving
11 forward with the Project and plans to make all the necessary remaining regulatory filings
12 to support the construction of the Project. JEA will have ninety (90) days from receipt of
13 the above notice from the Company to exercise its option to participate in Lee Nuclear.
14 If JEA exercises its option, it will join in the Company's filing of the application for a
15 Certificate of Environmental Compatibility and Public Convenience and Necessity
16 ("CPCN") and Base Load Review Order ("BLRO") with the Public Service Commission
17 of South Carolina ("PSCSC").

18 Q. IS JEA NOW AN EQUITY PARTNER IN THE LEE NUCLEAR PROJECT?

19 A. No. JEA does not own any interest in the Project. Under the Agreement, JEA only holds
20 an option to participate in the Lee Nuclear project, which JEA may or may not choose to
21 exercise in its discretion at the appropriate time. Duke Energy Carolinas firmly believes
22 that this approach provides necessary flexibility for both parties and advances regional
23 participation in this important Project.

1 Q. HOW IS THIS OPTION AGREEMENT BENEFICIAL TO THE CONTINUED
2 DEVELOPMENT OF THE PROJECT?

3 A. As I stated above, Duke Energy Carolinas views the sale of this option to JEA as a very
4 positive development and strong step forward for Lee Nuclear Station. The Company has
5 been, and will continue to be, a strong supporter of the regional generation concept for
6 new nuclear development. We believe this is an excellent first step to bring in partners
7 and make regional generation a reality. The Company is pursuing partners to share in the
8 construction, project management, and operational risks of constructing Lee Nuclear
9 Station, and, in turn, to share in the long-term benefits of this Project.

10 The Company believes that the option provides a mechanism for JEA to remain
11 engaged in the project and increases its likelihood of participating in the project after the
12 Company's receipt of the COL. In addition to the benefits of risk sharing, additional
13 partners on the Project will increase the financial flexibility the Company needs to meet
14 customer demands in the face of tremendous uncertainty relating to future environmental
15 constraints that will impact its current fleet. As less of the Company's capital will be tied
16 up in a single project, the Company will be better-positioned to respond effectively as the
17 evolving environmental requirements become more certain. For these reasons, Duke
18 Energy Carolinas firmly believes that bringing in partners on the Project is in the best
19 interest of our customers.

1 Q. DOES DUKE ENERGY CAROLINAS' EXECUTION OF THIS OPTION
2 AGREEMENT WITH JEA MEAN THAT THE COMPANY DOES NOT NEED
3 ALL OF THE CAPACITY FROM THE PROJECT IN 2021?

4 A. No. Duke Energy Carolinas' 2010 Integrated Resource Plan ("IRP") clearly
5 demonstrates that the future capacity and energy needs of the Company exceed the full
6 output of 100% of the Project. To the extent that the Company will receive less than
7 100% of the output of the Project due to JEA's exercise of its option, Duke Energy
8 Carolinas will seek to procure the capacity and energy necessary to meet its needs
9 through the procurement of substitute resources at least cost to its customers, including
10 possible participation in other regional nuclear projects. As I have stated previously,
11 Duke Energy Carolinas believes that joint ownership and regional development of new
12 nuclear facilities is the best path forward to meet the needs of its customers for the future,
13 and in this context that means multiple owners in Lee and Duke's possible participation
14 in other regional nuclear projects.

15 Duke Energy Carolinas recognizes that new nuclear development represents a
16 significant investment that will impact customers and the Company. As such, the
17 Company believes that we must consider all opportunities that will yield potential
18 benefits for our customers and reduce the risks related to its investment in the Project.
19 However, I must clearly re-iterate that the Company is well-positioned to move forward
20 on this project independently and can support the need for its full capacity.

1 Q. WILL DUKE ENERGY CAROLINAS CONTINUE TO PURSUE ADDITIONAL
2 PARTNERS TO PARTICIPATE IN THE PROJECT?

3 A. Yes. As I described in my direct testimony, Duke Energy Carolinas continues to assess
4 opportunities for joint ownership or financial arrangements that could be beneficial to its
5 customers. This option agreement with JEA represents a sound and strong first step
6 towards achieving its regional nuclear generation plan whereby multiple companies in the
7 region will partner to share risk and smooth out the rate impact to customers resulting
8 from these capital-intensive projects. Duke Energy Carolinas will continue to update the
9 Commission if there are any additional developments regarding joint ownership decisions
10 for the Lee Nuclear Station.

11 Q. DOES THIS CONCLUDE YOUR SUPPLEMENTAL TESTIMONY?

12 A. Yes.

I. INTRODUCTION AND PURPOSE

1 **Q. PLEASE STATE YOUR NAME, ADDRESS AND POSITION WITH DUKE**
2 **ENERGY CORPORATION.**

3 **A. My name is James E. Rogers, and my business address is 526 South Church**
4 **Street, Charlotte, North Carolina. I am Chairman, President, and Chief Executive**
5 **Officer ("CEO") of Duke Energy Corporation ("Duke Energy"). Duke Energy**
6 **Carolinas, LLC ("Duke Energy Carolinas" or the "Company") is a subsidiary of**
7 **Duke Energy.**

8 **Q. HAVE YOU PREVIOUSLY CAUSED DIRECT AND SUPPLEMENTAL**
9 **TESTIMONY TO BE FILED IN THIS PROCEEDING?**

10 **A. Yes. I filed direct testimony on November 15, 2010 and supplemental testimony**
11 **on February 8, 2011 in this docket.**

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

13 **A. The purpose of my rebuttal testimony is to respond to the testimony of Michael**
14 **Maness and Kennie Ellis, filed on behalf of the Public Staff on February 24, 2011,**
15 **and the testimony of Peter Bradford, filed on behalf of the Public Advocacy**
16 **Groups on February 24, 2011.**

17 **Q. PUBLIC ADVOCACY GROUPS WITNESS BRADFORD BASES**
18 **CERTAIN OF HIS ARGUMENTS IN THIS CASE ON THE IMPACTS**
19 **THE RECESSION AND LOW NATURAL GAS PRICES HAVE HAD ON**
20 **DEVELOPMENT SCHEDULES OF SOME NUCLEAR CONSTRUCTION**
21 **PROJECTS AROUND THE NATION. HAVE THESE FACTORS ALSO**
22 **AFFECTED THE LEE NUCLEAR PROJECT?**

1 A. Yes. The recent economic downturn has caused a short-term reduction in demand
2 for electricity. Furthermore, the market's anticipation of abundant shale gas
3 production has depressed forward natural gas prices, making gas-fired generation
4 more competitive. Although both of these events have delayed the need for new
5 nuclear capacity and caused the developers of several U.S.-based nuclear
6 construction projects, including Duke Energy Carolinas' proposed Lee Nuclear
7 Station, to move their construction dates, they do not eliminate the need for new
8 nuclear generation. As demonstrated in the Company's 2010 Integrated Resource
9 Plan ("IRP"), new nuclear generation remains the appropriate economic choice
10 for customers despite the short-term impacts from the economy and the effects
11 shale gas is having on natural gas markets.

12 **Q. WHY HAVEN'T ALL NUCLEAR DEVELOPMENT PROJECTS**
13 **EXPERIENCED THE SAME DELAYS?**

14 A. Duke Energy Carolinas has taken a deliberate, methodical approach to developing
15 the proposed Lee Nuclear Station. However, not all new nuclear development
16 projects have been proposed under similar market regulation or technology
17 choices. These differences can account for the different construction timelines for
18 each project. For example, several nuclear projects, including Constellation
19 Energy's Calvert Cliffs Unit 3, NRG Energy's South Texas Project, and Exelon's
20 Victoria County Station, were proposed in deregulated markets. Electricity
21 markets in these jurisdictions present nuclear construction projects with very
22 different challenges than regulated markets present. In regulated markets, like
23 North and South Carolina, utilities continue to have the obligation to plan for and

1 serve retail customers over the long-term. The regulators and utilities in these
2 markets continue to employ detailed integrated resource planning processes to
3 monitor energy and capacity needs and evaluate resource options. New nuclear
4 projects are subject to regulatory review and approval before, during, and after
5 construction.

6 Aside from market regulation, a company's reactor design and vendor
7 selection can also affect a project's development timeline. For example, TVO in
8 Finland, cited by Public Advocacy Groups Witness Bradford, chose AREVA's
9 EPR reactor design for its Olkiluoto Unit 3 project, which has experienced several
10 delays due to various construction-related issues. Duke Energy Carolinas, on the
11 other hand, selected Shaw Nuclear and Westinghouse Electric Company's
12 AP1000 reactor design. The Company is following the progress of reference
13 plant AP1000 projects at V.C. Summer and Vogtle, as well as those AP1000
14 projects in China, which are further along in their respective development and
15 construction than Lee Nuclear Station. The lessons learned from these projects
16 are being incorporated into Lee Nuclear Station and should reduce the
17 construction risk to the Company's customers.

18 **Q. PUBLIC ADVOCACY GROUPS WITNESS BRADFORD ALLEGES THE**
19 **PRESENT APPLICATION, IF APPROVED, WOULD EXPOSE DUKE**
20 **ENERGY CAROLINAS' CUSTOMERS TO COSTS AND HARM? IS**
21 **THIS TRUE?**

22 **A.** No, it is not. The continued development of Lee Nuclear Station as a potential
23 future resource for Duke Energy Carolinas' customers is beneficial to customers.

1 The Company has purposefully taken a measured and deliberate approach with
2 respect to the continued development of this important resource to limit the
3 potential risk to its customers during this long lead time process. In the context of
4 this Amended Application, the Public Advocacy Groups Witness Bradford makes
5 several of the same arguments that he made during the prior proceeding in this
6 docket.

7 For example, Witness Bradford warns against "shifting the risk of loss" to
8 customers and charging "large costs to captive customers," and advocates for
9 placing caps on the overall cost of the Lee Nuclear Station project. He also
10 recommends requiring a competitive power procurement process and requiring
11 the Company to demonstrate that it has maximized all cost-effective energy
12 efficiency before the Commission can deem any decision to build a nuclear plant
13 to be prudent. This testimony reflects a misunderstanding of the scope and
14 breadth of the project development application process under N.C. Gen. Stat. §
15 62-110.7. This proceeding seeks approval of the Company's decision to continue
16 to incur project development costs for Lee Nuclear Station. The Company is not
17 seeking a Certificate of Public Convenience and Necessity for this project. As
18 noted by the North Carolina Utilities Commission ("the Commission") in its
19 Order Approving Decision to Incur Project Development Costs issued on June 11,
20 2008 in this docket,

21 [m]ost of the recommendations made by the Groups appear to be
22 based on the assumption that this proceeding entails greater
23 assurances than it will actually provide. . . many of the concerns
24 expressed by the Groups are more appropriately addressed in a
25 certificate proceeding or its equivalent or in other proceedings in

1 which the prudence and reasonableness of specific activities and
2 costs will be evaluated and determined. Order at 12.

3
4 In the future, when the Company determines it is prudent to proceed to
5 construction of Lee Nuclear Station and seeks to incorporate any project costs into
6 customer rates, it will first have to seek this Commission's approval and will have
7 to meet all relevant statutory requirements at that time.

8 **Q. THE PURSUIT OF NUCLEAR DEVELOPMENT PARTNERS HAS BEEN**
9 **DESCRIBED BY PUBLIC STAFF AS "SLOW." DO YOU AGREE WITH**
10 **THIS CHARACTERIZATION FOR LEE NUCLEAR STATION?**

11 **A.** No. Partnerships, unlike some construction-related aspects of the project, do not
12 follow a predefined schedule for completion. Duke Energy remains a proponent
13 of regional nuclear development and is committed to adding partners for Lee
14 Nuclear Station in a prudent, deliberate manner. While it has been approximately
15 three years since Duke Energy filed a combined operating license ("COL")
16 application with the NRC, the target commercial operation date for Lee Nuclear
17 Station remains approximately ten years ahead of us. There remains ample time
18 to include additional partners in the Lee Nuclear Station. Consistent with the
19 Company's regional nuclear development strategy, Duke Energy Carolinas also
20 continues to explore participation in other regional nuclear generation projects
21 where the Company's participation in such project would be beneficial to its
22 customers.

23 **Q. THE PUBLIC STAFF WITNESSES SPECIFICALLY DISCUSSED DUKE**
24 **ENERGY CAROLINAS' EFFORTS TO JOIN SOUTH CAROLINA**
25 **ELECTRIC & GAS AND SANTEE COOPER IN THE NEW NUCLEAR**

1 PLANTS PLANNED FOR SUMMER NUCLEAR STATION. WHAT IS
2 THE COMPANY'S POSITION ON THIS ISSUE?

3 A. Duke Energy Carolinas is committed to regional nuclear generation and to
4 prudently managing and sharing the risks associated with new nuclear
5 development. The process of evaluating partnership opportunities is neither
6 simple nor quick. Partnerships in a new nuclear facility will likely last a very
7 long time, so adequate deliberation and due diligence is necessary. Both Duke
8 Energy Carolinas and its potential partners must evaluate the financial ability of
9 the potential partner to pay for new nuclear generating facilities now and into the
10 future. The parties must also analyze how a partner would be integrated into the
11 process for obtaining the Combined Construction and Operating License ("COL")
12 from the U.S. Nuclear Regulatory Commission for the subject facility. Because
13 of the long life cycle of nuclear development and the significant costs and
14 potential financial risk associated with ownership of a nuclear generating facility,
15 the process of negotiating an acceptable partnership arrangement takes a
16 substantial amount of time and effort. No party enters into such an agreement
17 lightly and many discussions, meetings, exchanges of information and draft
18 agreements occur during the due diligence and negotiation process. It should be
19 noted that most of the discussions between the Company and potential partners
20 are covered by confidentiality agreements that limit the information either party
21 can disclose.

22 As previously stated in my supplemental testimony filed in this docket, the
23 Company recently executed an agreement with JEA giving it the option to

1 purchase not less than five and not more than twenty percent of the proposed Lee
2 Nuclear Station at a future point in time. Additionally, since the filing of my
3 direct and supplemental testimony, discussions between Duke Energy Carolinas
4 and Santee Cooper regarding the Company's potential participation in the new
5 units at V.C. Summer Nuclear Plant ("Summer") have continued. The Company
6 hopes these discussions will lead to mutually beneficial opportunities for risk
7 sharing for Lee Nuclear Station and the new Summer units. Duke Energy
8 Carolinas is pursuing this opportunity at a steady, deliberate pace, recognizing the
9 potential long-term ramifications of a partnership in new nuclear generation.
10 Duke Energy Carolinas will continue to keep the Commission apprised of
11 partnership developments.

12 **Q. IF THE COMMISSION APPROVES DUKE ENERGY CAROLINAS'**
13 **DECISION TO CONTINUE TO INCUR PROJECT DEVELOPMENT**
14 **COSTS RELATED TO LEE NUCLEAR STATION, SHOULD THE**
15 **COMPANY'S ALLOWED RETURN ON EQUITY ("ROE") BE REDUCED**
16 **IN ITS NEXT GENERAL RATE CASE AS RECOMMENDED BY PUBLIC**
17 **ADVOCACY GROUPS WITNESS BRADFORD?**

18 **A.** No, a Commission order approving the present application only approves the
19 *Company's decision to continue incurring costs related to pre-development work*
20 *on the Lee Nuclear Station project. It does not approve the decision to build the*
21 *facility, nor does it eliminate the licensing, permitting, and construction risks*
22 *associated with the project. The Company believes the risks in successfully*
23 *developing, designing, and constructing Lee Nuclear Station are not mitigated by*

1 the Commission's approval of Duke Energy Carolinas' decision to continue
2 developing this project through the receipt of the COL for Lee Nuclear Station.
3 Thus, it would be inappropriate to reduce the Company's allowed ROE based on
4 the result of this single proceeding.

5 **Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

6 **A. Yes, it does.**

1 Q. Mr. Rogers, have you prepared a summary of your
2 testimony?

3 A. Yes, I have.

4 Q. At this time, with the Commission's approval, I
5 would ask you to provide a summary.

6 A. The purpose of my testimony is to support Duke
7 Energy Carolinas' Revised Amended Application for
8 Approval of the Decision to Incur Nuclear
9 Generation Project Development Costs. As part of
10 this application, Duke is seeking approval of its
11 decision to incur total development costs of \$459
12 million through December 31st, 2013, for the
13 company's proposed William States Lee Nuclear
14 Station to be located in Cherokee County, South
15 Carolina.

16 We have an obligation to plan for and
17 meet our customers' energy needs, and we must do so
18 reliably, cost effectively, in the face of a very
19 uncertain future. Lee Nuclear Station will provide
20 significant value to our customers in the face of
21 the uncertainties posed by future economic,
22 environmental, regulatory and operating
23 circumstances and, as such, it is prudent for us to
24 continue the necessary development activities to

1 obtain the Combined Construction and Operating
2 License for Lee expected in 2013.

3 In addition to meeting our customers'
4 growing energy needs, the Company must also
5 consider a changing regulatory landscape. At
6 present, almost 40 percent of our energy is
7 produced from coal resources. The Company's fleet
8 of generating facilities simply must change, along
9 with the evolving environmental, legal and
10 regulatory constraints. We will retire
11 approximately 1,667 MW of older, less efficient
12 coal units as new energy efficiency savings are
13 achieved and the new advanced clean coal Cliffside
14 Unit 6 is added to our fleet, as well as two
15 combined cycle gas plants.

16 As you all will remember, the Company
17 notified the Nuclear Regulatory Commission that a
18 commercial operational date of 2021 is more
19 appropriate than the 2018 date originally sought by
20 the company in its Combined Construction and
21 Operating License Application filed on December
22 13th, 2007, and that application is included in
23 this docket. The decision was based on our
24 internal resource planning process, which includes

1 analyses of various data and management's
2 perspective on and interpretation of that data.

3 As a result, the Company currently
4 anticipates receiving the COL from the NRC by
5 December 31st, 2013. The Company seeks to obtain
6 approval of its decision to incur costs through
7 that date. The Company cannot, and I underscore,
8 cannot obtain the COL in 2013 to support the 2021
9 COD without incurring total costs of up to roughly
10 \$459 million.

11 Over the long-term horizon, and in our
12 industry we have to take the long view because we
13 know of plants that last 40 to 60 years -- over the
14 long horizon, nuclear costs, particularly the fuel
15 costs, are relatively low as compared to the costs
16 of coal or natural gas facilities. Duke Energy
17 Carolinas' current nuclear fleet provides over
18 5,000 MWs of capacity and approximately 50 percent
19 of the energy that our consumers consume. Due in
20 part to the relatively low costs associated with
21 the operation of the Company's nuclear facilities,
22 our retail customers enjoy rates that are 20 to 30
23 percent lower than the national average, and one of
24 the lowest in the state. Low electricity rates in

1 our region give the entire region a competitive
2 advantage in attracting new jobs and businesses,
3 especially in these very tough financial times.
4 Ultimately, this benefits our customers.

5 Even in the absence of carbon
6 legislation, we must modernize and decarbonize our
7 resource options over the coming decades to retain
8 its ability to provide affordable, reliable and
9 increasingly clean electricity to all of its
10 customers. No matter what form it ultimately
11 takes, stringent regulation of carbon and other
12 emissions will occur. To ignore this fact would
13 be, in my judgment, unreasonable. To attempt to
14 meet all aspects of the affordable, reliable and
15 clean goals, the Company must retain and enhance
16 the diversity of its generation resource portfolio.
17 A single resource type is just not the answer. It
18 takes a portfolio, a combination of resources,
19 including new nuclear, natural gas, energy
20 efficiency, demand-side management programs,
21 renewables and advanced coal. All of these must be
22 incorporated into our plan so that we can balance
23 risk and reliably meet the demand, reduce carbon
24 and other pollutant emissions, and minimize cost to

1 consumers.

2 There's been a lot of discussion about
3 natural gas in the testimony. Natural gas will
4 certainly play a role in the Company's resource mix
5 in the future, but the Company is taking a very
6 measured approach with respect to its evolving
7 market, and there's a variety of reasons in my
8 testimony that I talk about why we need to be
9 cautious and measured with respect to significantly
10 increasing our reliance on natural gas.

11 For all the reasons discussed in my
12 testimony and those of Duke Energy Carolinas' other
13 witnesses, the continued development of Lee Nuclear
14 Station is valuable and important for our
15 customers. We believe that the decision to incur
16 total project development costs of up to \$459
17 million through December 31st, '13, is prudent and
18 reasonable. At this time, Duke Energy Carolinas is
19 not asking the Commission to make a determination
20 with respect to recovery of the dollars spent on
21 developing Lee. That's a very important point,
22 especially in light of some of the presentations
23 that were made this morning. If the Commission
24 grants this request, there will not be an immediate

1 cost impact to customers. We'll have to go through
2 a certificate process and then our ratemaking
3 process before the rates to our consumers will
4 actually be increased.

5 That's a not-so-quick summary of my
6 direct testimony. I will do a quick summary of my
7 supplemental testimony.

8 The purpose of my supplemental testimony
9 is to update you all with respect to the status of
10 partnership opportunities for Duke Energy Carolinas
11 relating to this nuclear plant. As you all have --
12 as you all know, we entered into an option
13 agreement with JEA, a municipally-owned electric
14 utility serving the City of Jacksonville, and they
15 have -- their option allows them to participate
16 from 5 percent up to 20 percent in the project.

17 If JEA exercises its option -- this kind
18 of goes to some of Bradford's comment, Mr.
19 Bradford's, it will join in the Company's filing of
20 the Certificate of Environmental Compatibility and
21 Public Convenience and Necessity and Base Load
22 Review Order with the Public Service Commission of
23 South Carolina. So at the end of the day, the
24 costs would be properly allocated if they exercise

1 the option at the beginning.

2 We've long been an advocate of regional
3 plants, regional ownership of plants. We think
4 that is the way forward in terms of building new
5 nuclear in the future, and we've been walking the
6 talk by trying to find partners to participate with
7 us in that plan, and JEA has stepped up to do that.
8 So virtually all of my testimony goes to detailing
9 that relationship.

10 Finally, I'd like to quickly summarize,
11 also, my rebuttal testimony, where I had an
12 opportunity to respond to Witness Bradford, as well
13 as to the Staff, and I did that in some detail on
14 many of the major points that they made. I will
15 not go through that now. I think I'll have plenty
16 of opportunities on cross examination to delve into
17 each of those issues, because my testimony is quite
18 clear as to why I disagree with certain aspects of
19 their testimony.

20 So I am -- that's a very quick summary of
21 both the supplemental and rebuttal testimony.

22 MS. SHAFEEK-HORTON: With that, I will
23 tender Mr. Rogers for cross examination.

1 CHAIRMAN FINLEY: Mr. Runkle.

2 MS. SHAFEEK-HORTON: Excuse me. I'm
3 sorry. Yes. I have one follow-up question before
4 I tender him.

5 CHAIRMAN FINLEY: All right.

6 THE WITNESS: That's always scary for a
7 witness.

8 Q. Mr. Rogers, you referred to this when you were
9 doing your summary, but you heard the Public
10 Advocacy Groups' witness Peter Bradford say that
11 the company's rates are currently impacted by
12 predevelopment costs previously incurred by Duke.
13 Did you hear that?

14 A. I did.

15 Q. Is that statement accurate?

16 A. No, it is not.

17 Q. And what is your understanding as to whether Duke's
18 rates reflect any costs associated with the
19 predevelopment of Lee?

20 A. With respect to the costs that have been approved
21 by this Commission in the prior proceedings, those
22 are not included in our rates today. The
23 additional costs that we're asking for in this
24 proceeding will not be included in our rates if the

1 Commission approves our increase in development
2 costs. It will only be after we've demonstrated to
3 this Commission through a certificate process that
4 we need this asset and it is the best option at
5 this time. And once they make that finding, these
6 costs will not be recovered in our rates until a
7 subsequent rate proceeding.

8 MS. SHAFEEK-HORTON: Thank you. Now I
9 will tender him.

10 CHAIRMAN FINLEY: All right. Have you
11 all decided on an order of cross examination?

12 MR. RUNKLE: I'll go ahead first.

13 CHAIRMAN FINLEY: All right.

14 CROSS EXAMINATION BY MR. RUNKLE:

15 Q. Good morning, Mr. Rogers.

16 A. Good morning.

17 Q. With that last point, I mean, the statute says what
18 the statute says, and looking at General Statute
19 62-110.7(c), which is part of Senate Bill 3, it
20 says "All reasonable and prudent project
21 development costs, as determined by the Commission,
22 incurred for the potential nuclear electric
23 generating facility shall be included in a public
24 utility's rate base and shall be fully recoverable

1 through rates in a general rate case proceeding
2 pursuant to G.S. 62-133." Now, you're saying that
3 you cannot -- that you cannot recover those rates
4 until a certificate is granted?

5 A. That's my understanding.

6 Q. Okay. I think we'll just have to deal with that
7 when we look at the statutes and proposed orders,
8 then. What I'd really like to do is start at
9 30,000 feet and sort of drill down to the Lee, so
10 if you'll bear with me as we go through some of the
11 preliminaries. We'll get to some of the Lee
12 factors.

13 Looking at the construction of a power
14 plant, there are several factors that could lead to
15 a cost overrun. Is that correct?

16 A. There are numerous factors, yes, sir.

17 Q. Schedule slippage would be one. As the COD is put
18 off, that may include the cost increase?

19 A. Well, it depends on when the COD is actually
20 delayed.

21 Q. And would the cost of the key components be one of
22 the factors that could lead to cost overruns?

23 A. The important point here is, is that you make an
24 estimate during the CPCN proceeding of what the

1 costs will be, and at that point you would have
2 probably entered into an EPC contract and you've
3 started down the road of committing to the purchase
4 of equipment.

5 Q. But if certain key components, the cost of those
6 key components increase, there could be a cost
7 overrun?

8 A. Yes, sir. There can be a cost overrun if the
9 components increase or the cost of labor increased,
10 or after you've started construction, there is a
11 delay.

12 Q. And, in fact, if there are increased regulatory
13 burdens or if there are changes in rules from the
14 NRC, that could lead to cost overruns?

15 A. Yes, sir. It can.

16 Q. In fact, that's what happened in the early '80's
17 after Three Mile Island. There were significant
18 changes required by the Nuclear Regulatory
19 Commission on projects that were being constructed
20 at that time.

21 A. That's correct.

22 Q. And so anything that changes design after the start
23 of construction could lead to a cost overrun.

24 A. That's correct, although I think it's important to

1 keep in mind that we have proposed AP1000. SCANA
2 is building that technology today, or is preparing
3 to, awaiting their COL. Southern is proposing to
4 build an AP1000. And there are three AP1000s under
5 construction in China, and those particular units
6 may well be completed or substantially completed
7 before we even begin construction.

8 Q. Yes, sir. I understand that, and I have questions
9 for Mr. Jamil about the AP1000. I think it may be
10 better in his bailiwick.

11 A. I would definitely agree with that point.

12 Q. And if there were upheavals in the national global
13 economy, that might cause a cost overrun?

14 A. I think if the cost -- if you had a balkanization
15 of financial markets which are now globalized,
16 could drive up the cost of capital. I mean,
17 there's a variety of things could happen, all of
18 which would impact not just nuclear, but the
19 building of coal or gas or investment in
20 renewables. All the factors that you're talking
21 about affect all the options that we have in front
22 of us.

23 Q. And while we're there, on the natural gas plants;
24 Duke has gone ahead constructing the Buck natural

1 gas plant, has it not?

2 A. Yes, sir.

3 Q. And that COD has not been delayed, has it?

4 A. Has not.

5 Q. Now, other kinds of things, if there was a
6 terrorism attack, might that cause cost overruns in
7 the construction of a power plant?

8 A. Are you assuming a terrorist attack during
9 construction?

10 Q. Or just a terrorism attack on any of the other
11 power plants.

12 A. That's not -- it doesn't necessarily follow that
13 would translate into cost overruns.

14 Q. Unless there were regulatory -- additional
15 regulatory burdens that might stem from that
16 terrorism attack.

17 A. You're asking me to speculate about a terrorist
18 attack on a plant that might be a different design,
19 it might be in a different part of the world. I
20 just can't speculate what implication it would have
21 with respect to the plant that we're proposing.

22 Q. It certainly might -- if there was a -- well, let's
23 use the example of what's going on in Japan, the
24 Fukushima plant. That may make a change in the

1 cost of capital, may it not?

2 A. Well, I think the cost of capital for companies
3 like ours is driven by the strength of our balance
4 sheet, and that's the primary determinant of what
5 our cost of capital will be. If there are macro
6 events, that could have impact on the cost of
7 capital for all enterprises that are in the capital
8 market.

9 Q. If nuclear -- the development of nuclear power
10 plants was seen to be more risky after an accident
11 or in terms of an attack or something like that,
12 would you expect the cost of capital to go up for
13 nuclear power plants?

14 A. When we go to market to borrow money or to issue
15 equity, we don't do it for a specific plant. We do
16 it just to meet our overall capital needs. And, in
17 fact, over the last two or three years, we've
18 raised over \$2 billion at less than 5 percent, and
19 with a term of more than 10 years, and that money
20 is then used for a variety of projects. It is not
21 designated for any single one. I will add, and I
22 haven't carefully read it, but Moody's issued a
23 report yesterday with respect to Japan and what's
24 going on there, and they see a heightened potential

1 risk, but not so much so that they're going to
2 change the ratings on any of the companies. Even
3 as drastic as the Japanese situation seems to be,
4 and we really don't know the complete story there
5 yet -- it has to play out -- but they quickly
6 pointed out that it gives an overall kind of sense
7 of higher risk, but doesn't necessarily translate
8 into changing of the risk profile with respect to
9 any single company.

10 Q. Well, I agree with you, it's still early days on
11 that, and we'll have to see how that bears out as
12 accurate. All right. Now, in Duke looking at the
13 Lee Station, can you construct, you know, sitting
14 here today looking out, forecast to the days when
15 it would -- through construction, can you do that
16 without a federal loan guarantee?

17 A. We believe that we can build this plant without a
18 federal loan guarantee.

19 Q. Have you applied -- has Duke applied for a federal
20 loan guarantee?

21 A. Yes, we have.

22 Q. And you're not in the top four of the final four, I
23 think it was mentioned?

24 A. No. We're in the Elite 8, to savor the basketball

1 analogy.

2 Q. Now, if a utility was constructing a power plant
3 and had a partner that had, say, a 50 percent share
4 or Jacksonville with a 5 to 20 percent share, if
5 that partner dropped off for some reason, would
6 that lead to cost overruns?

7 A. No.

8 Q. Now, looking at the factors that might lead to the
9 cancellation of the construction of a power plant
10 while it was being constructed, would -- what are
11 some of those risks? I mean, if demand went down,
12 you didn't need the plant, that might be one reason
13 to cancel it?

14 A. I think we're in an interesting transitional period
15 in our industry, because the average age of our
16 plants are 40 years old. And, again, staying at
17 the 30,000 foot level that you want to stay at, if
18 you look across the United States, of the coal
19 plants, which is 300,000 MW, 100,000 MW are over 40
20 years old, and many are 50 years old. So we're in
21 a process of ultimately shutting down and replacing
22 and modernizing our coal fleet in the United
23 States. Fifty percent of electricity comes from
24 coal. So we're in a modernization period that will

1 continue on and probably be accelerated by the new
2 environmental regulations that are being proposed,
3 I think, later this month or early next month at
4 the EPA. So as you look at the 2021, '22 time
5 frame, what you are looking at is not just growth
6 in demand, but the need to modernize as the most
7 economic thing to do.

8 MR. RUNKLE: May I approach the witness?

9 CHAIRMAN FINLEY: Yes.

10 MR. RUNKLE: Mr. Chairman, if we can
11 identify this as Public Advocacy Groups' Rogers
12 Cross Exhibit 1.

13 CHAIRMAN FINLEY: It shall be so
14 identified.

15 (PUBLIC ADVOCACY GROUPS' ROGERS CROSS

16 EXAMINATION EXHIBIT NUMBER 1 WAS

17 MARKED FOR IDENTIFICATION.)

18 Q. And as we were just discussing, you've stated that
19 Duke has actually -- is modernizing its coal fleet
20 and modernizing its generating fleet. I want to
21 talk to you a little bit about the cost overruns at
22 the Edwardsport coal plant. How big a coal plant
23 is this?

24 A. Six hundred and thirty-eight (638) MW, roughly.

1 Q. When Duke got the equivalent of its Certificate for
2 Convenience and Necessity, what was the estimate of
3 the cost of that plant?

4 A. It was approximately \$1.9 billion.

5 Q. And what is the estimated cost at the present date?

6 A. The estimated cost -- well, let me give you the
7 sequence. We came in with an increase, and the
8 Commission approved an increase in the cost at
9 2.35, and then we added -- and then we later came
10 in with an increase of 530 million.

11 Q. So right now, the estimated cost is \$2.9 billion?

12 A. It's 2.88, assuming AFUDC.

13 Q. And what is the additional AFUDC on that plant?

14 A. The AFUDC in the 530 number is roughly 154 million.

15 Q. And what would be the AFUDC on the 2.88 billion?

16 A. Well, the way an AFUDC works in Indiana is we would
17 have zero AFUDC if the Commission was seeking up
18 the tracker that allows us to recover construction
19 work in progress, the cash payments. And when
20 there's a delay in that, we are required to book
21 AFUDC. And so in a sense, the AFUDC is kind of a
22 consequence of a miss-match of the regulatory
23 proceedings with respect to allowing us to recover
24 CWIP during the building period, which is, by the

1 way, completely out of our control.

2 Q. And so on the 2.88 billion, what is your estimate
3 about the AFUDC on that? That's out of your
4 control, but what do you think it will be?

5 A. Well, in the 2.35 to the 530, the number was 150,
6 and there's been AFUDC increases since then because
7 of the delay in the approval of the construction
8 work in progress for trackers.

9 Q. And so, I mean, is there a dollar figure? I know
10 you're saying that's been delayed. Do you have a
11 dollar figure on what the additional AFUDC is over
12 the 2.88 billion?

13 A. No, because the 2.88 combines both actual
14 construction costs and AFUDC. A better way to
15 think about it is, is that what we've done in this
16 case is put a hard cost cap on at 2.72 billion, and
17 that is tied to the actual construction cost, and
18 the AFUDC we have slid to a side, and it will be
19 whatever it will be, because that is totally in the
20 control of the Commission in terms of the timing of
21 the CWIP trackers.

22 Q. On this Exhibit 1 that I handed to you, this is
23 from the Duke Energy website as one of their press
24 releases. Are you familiar with this press

1 release?

2 A. I am very familiar with it.

3 Q. And some of the numbers that you've got are
4 reflected in this press release, Exhibit 1.

5 A. Yes, sir.

6 Q. Now, for the Edwardsport plant, you're now
7 proposing a hard cost cap of 2.72 billion. Is that
8 correct?

9 A. Yes, sir, plus financing cost on that amount.

10 Q. Okay. And so no matter -- what percentage of the
11 construction is completed on that plant?

12 A. Eighty percent.

13 Q. And so if the actual costs of that plant go up to 3
14 billion, will -- and so it's Duke's responsibility
15 to cover the additional cost on that?

16 A. Investors will bear the burden of all costs over
17 the 2.72, plus financing cost.

18 Q. And that's just a proposal at this time. This
19 hasn't been approved by the Indiana Commission?

20 A. This is our litigation position. What it
21 effectively does is this \$530 million increase,
22 what we have done is taken a series of steps to
23 essentially eliminate the cost impact on consumers
24 of the incremental 530, and we've done it with a

1 variety of adjustments.

2 Q. Now, looking at a power plant like this, is there
3 any chance that you will cancel the Edwardsport
4 plant?

5 A. There's a zero chance that we will cancel it.

6 Q. If the costs are doubled from the 2.72 billion,
7 will you still go ahead with that?

8 A. Double?

9 Q. Yeah.

10 A. That's so speculative and so out of the ballpark,
11 I'm not going to comment on it.

12 Q. Okay. Well, if it was a billion dollars more,
13 would you consider canceling the plant?

14 A. You're still operating in a hypothetical that is I
15 don't even think in the zip code of worth
16 commenting on.

17 Q. Well, let me see. The initial price -- the initial
18 estimate of the cost at the -- in the certificate
19 was 1.9 billion, you said?

20 A. Yes, sir.

21 Q. And it's gone up almost \$1 billion.

22 A. That's correct.

23 Q. Now, looking at the other modernization of the
24 Cliffside coal unit, are you familiar with that

1 plant?

2 A. I am.

3 Q. Now, when Duke initially came in to get a
4 certificate, it was looking at two units, 1,600 MW,
5 and the estimate cost was roughly \$2 billion. Is
6 that correct?

7 A. I can't remember the exact number, but subject to
8 check, I would accept that.

9 Q. And then after getting the certificate, in looking
10 at one unit of 840 MW, is that correct, for the
11 Cliffside?

12 A. Correct.

13 Q. And the estimate of the cost is \$1.8 billion?

14 A. I think that was the final cost estimate that was
15 part of the approval by the Commission of the CPCN.

16 Q. Now, looking again back at our 30,000 foot level,
17 what are the estimates for the construction of new
18 nuclear power plants in this country? Do you have
19 a range on that?

20 A. I think it depends on the technology. I think it
21 varies. I will note one important statistic as we
22 talk about estimated cost and actual cost to
23 completion, in the last several years there's been
24 six to seven base load coal plants, not many, built

1 in the U.S. Virtually every one of them have come
2 in somewhere between 23 and 50 percent above the
3 Commission-approved cost estimate in the CPCN. So
4 this is the first time in 30 to 40 years that our
5 industry is building base load generation, and
6 we're experiencing the same thing we experienced
7 back in the '70's and '80's. And so in a sense,
8 what you're seeing is, yes, we had cost overruns in
9 the '70's and '80's with nuclear, but today our
10 rates are 20 to 30 percent lower than the national
11 average, and it turns out to have been a smart bet,
12 even though it was a cost overrun at that time.
13 So, again, I am thankful for the perseverance and
14 long-term view of the Commission at that time to
15 allow the completion of these plants. If they
16 hadn't been completed, we wouldn't be sitting here
17 today with rates 20 to 30 percent lower than the
18 rest of the country.

19 Q. And then you said that the estimates for the cost
20 of construction of new power plants depends on the
21 technology. Do you have a dollar figure on that?

22 A. It's varied. In terms of the coal plants?

23 Q. In terms of the nuclear plants.

24 A. I don't remember the exact numbers of what the cost

1 overruns for the nuclear plants were, but there
2 were significant cost overruns during that period.
3 But not withstanding the cost overruns, it's turned
4 out to be a great deal for consumers.

5 Q. Excuse me. I think you misinterpreted my question.
6 I'm saying today, in looking at the industry
7 industry-wide, construction of new nuclear plants,
8 do you have a dollar figure on the estimated cost
9 of that?

10 A. I think in our testimony we say that the overnight
11 cost of a plant, based on best available
12 information today, is roughly \$11 billion, but I'd
13 make one other follow-up point that I think is very
14 important and differentiates the Edwardsport plant
15 from what we would be trying to do with building
16 the Lee Station. In the Edwardsport plant, we
17 didn't have a reference plant, so when you do the
18 engineering, it's far more complex because you have
19 to design and redesign. When we get to the point
20 of building the Lee Station, there will be a
21 reference plant, and that will reduce the risk of
22 any cost overruns. For instance, even with
23 Cliffside when we established the 1.8 number, there
24 are reference plants with respect to supercritical,

1 and as a consequence of that, we're coming in on
2 time and at budget with respect to that facility,
3 which will be completed next year.

4 The big differentiator that I'm trying to
5 answer your question with is the ability of having
6 a reference plant. In the '70's and '80's there
7 were no reference plants. Today, by us taking a
8 measured and careful approach, we will be able to
9 kind of learn from what SCANA does, we will have
10 learned from what Southern does, we will learn
11 probably more from what the Chinese are doing
12 because they will have completed the plants before
13 we begin. And so the important point is we will
14 have a clear ability -- a clearer ability to
15 establish a reference plant design and be able to
16 predict with greater capability what those costs
17 will be.

18 Q. Again, I will discuss -- ask Mr. Jamil about some
19 of those design features that you're discussing,
20 but my first set of questions, really, about cost
21 overruns, and we talked about, you know, schedule
22 slippage to delays, lack of demand, changes of
23 regulatory burdens, change in design after the
24 beginning of the construction. Are these the same

1 factors that could cause a nuclear plant -- cost
2 overruns in a nuclear plant?

3 A. Absolutely. Have you ever remodeled a kitchen? I
4 mean, my experience is it never really comes in
5 exactly as I expect it. Any time you're doing a
6 construction project, regardless of the size, you
7 run certain risk in terms of both timing as well as
8 cost. And my point is that by taking a measured,
9 deliberate approach as we have, we're positioning
10 ourselves to minimize -- not eliminate, but to
11 minimize any cost overruns when the plant is built
12 and completed.

13 MR. RUNKLE: May I approach the witness?

14 CHAIRMAN FINLEY: Yes.

15 MR. RUNKLE: Mr. Chairman, if we can
16 identify this as Public Advocacy Groups' Rogers
17 Cross Exhibit 2.

18 CHAIRMAN FINLEY: It shall be identified
19 as Public Advocacy Groups' Rogers Cross Examination
20 Exhibit Number 2.

21 (PUBLIC ADVOCACY GROUPS' ROGERS

22 CROSS EXAMINATION EXHIBIT NUMBER 2

23 WAS MARKED FOR IDENTIFICATION.)

24 Q. Sir, have you seen this document before?

1 A. I've never seen it with all this redacted --
2 redacted like this.

3 Q. A copy was attached to Southern Environmental Law
4 Center's comments in the IRP proceeding and,
5 according to them, it came from one of the lawsuits
6 in Indiana or one of the regulatory proceedings.
7 And as I understand, it was redacted because it had
8 confidential business information in it. Would
9 that be a fair characterization?

10 A. It is.

11 Q. And just, if your eyes are better than mine, can
12 you just read that sentence that's unredacted?

13 A. And I'm reading it, obviously, out of the context
14 of the complete document. "Obviously, the 'design
15 it once, build it many times' philosophy that
16 underpins the AP1000 design substantially reduces
17 the likelihood of overruns in the 340 percent to
18 450 percent range, but it is not unreasonable to
19 assume and plan for costs to be as high as 40
20 percent to 50 percent above current estimates (see,
21 for example, Cliffside and Edwardsport.)"

22 Q. And who did you receive this email from?

23 A. From Jim Turner.

24 Q. And what was Jim Turner's position with Duke?

1 A. He was a group vice president in charge of
2 distribution and regulatory parts of our business.

3 Q. And he has testified in front of this Commission
4 before?

5 A. I believe he has.

6 Q. And he is no longer with Duke, as I understand it.

7 A. That's correct.

8 Q. And why did he leave Duke?

9 A. He made the personal decision to resign and pursue
10 other interests.

11 Q. And I hate to give you such a redacted -- you said
12 it was out of context. What was the other context
13 that --

14 A. Sure.

15 Q. -- we might better understand the analysis of
16 Duke's nuclear history?

17 A. Absolutely. I mean, here's the context, I asked
18 our team to go back and go from 1967 to 1987 and
19 look at Duke's history of building nuclear plants
20 in North and South Carolina, and I asked them to
21 look at a variety of different factors through that
22 period of time to see if there is anything that we
23 can learn from the past that will make us smarter
24 in the future. And so that's what this document --

1 so this study was done, and what Jim was doing was
2 commenting on what his conclusions were with
3 respect to the document.

4 I have a little different interpretation
5 than he does of this statement, and I'd be glad to
6 explain it to you, if you'd like.

7 Q. Well, and you stated that Mr. Turner left for
8 personal reasons. He was under investigation by
9 the Department of Justice for his conduct with the
10 Indiana Commission?

11 A. That's not correct.

12 Q. It has been widely reported as correct. Are you
13 saying that's not the reason?

14 A. I'm saying -- one, I'm saying that's not the reason
15 and, two, it's not true that he's been under
16 investigation by any federal agency, to my
17 knowledge.

18 Q. Now, we're coming down out of the 30,000 feet, and
19 let's look at the Lee Station nuclear plant. In
20 your supplemental testimony, you talked about
21 Jacksonville, Florida having a buy-in? Is that
22 correct?

23 A. That's correct.

24 Q. And so they just had an option at this point for 5

1 percent to 20 percent?

2 A. That's correct.

3 Q. What was the cost that you gave them of what that 5
4 to 20 percent would be?

5 A. Well, I mean, basically we gave them kind of the
6 numbers as we know it today, and we basically said
7 once we get the COL approved, at that point you
8 will have an opportunity to either be in or out
9 going forward, so we'll have a more refined cost
10 estimate at that time.

11 Q. So was there any estimate when the City of
12 Jacksonville signed its option that they had any
13 idea what the cost would be?

14 A. They knew it would be in the zip code of 11
15 billion, and they were going to make their decision
16 then based on their need, which they thought they
17 would have at the time, and they thought that they
18 were willing to enter into an option because they
19 thought this would be a good opportunity for them
20 to help meet their own requirements to supply, you
21 know, affordable, reliable, clean electricity.

22 Q. And in the testimony, it also said that Duke was in
23 discussions with Santee Cooper about some purchase
24 of the -- of a portion of the Lee Station. And

1 without going into confidential information, are
2 there other entities and utilities that Duke is in
3 discussion with about taking a portion of the Lee
4 Station?

5 A. We have had a -- we have had and are having a wide
6 range of conversations with respect to the Lee
7 Station.

8 Q. And with other utilities besides Santee Cooper?

9 A. That's correct.

10 Q. And with other -- perhaps with other cities and
11 municipalities other than Jacksonville?

12 A. We have cast a wide net in having a range of
13 conversations, but let me be clear about an
14 important point that I made in my testimony. Even
15 if they don't take any of it, we still need that
16 capacity. And certainly, Ms. Hager will -- you'll
17 be able to talk to her about that. But based on
18 our IRP analysis, clearly, we need the capacity,
19 and that this is the best alternative.

20 Q. So right now at the Lee Station, looking at two
21 additional units, two units there, in best case
22 from Duke's point of view, what portion of one or
23 both plants would you want to have a partner with?

24 A. My judgment goes back to kind of the basic view I

1 have about regional ownership of generation, and I
2 think it makes sense, both from an investor's
3 perspective as well as from a customer's
4 perspective. From an investor's perspective, if
5 you build the power plant with three to five
6 owners, you're really spreading the risk and not
7 putting undue burden on any one company's balance
8 sheet. From a customer perspective, it's equally
9 good, but for a different reason, and that is
10 you're able to smooth out the cost increase of new
11 nuclear, and it will be more incremental amounts
12 assigned to each customer. So to be a more
13 incremental approach, a smoothed out approach, if
14 I'm a consumer, I'd rather have it happen that way
15 than in a more lumpy way than the building of power
16 plants has historically happened in the past.

17 Q. Well, to get back to my question, what would be
18 Duke's best case of -- what kind of -- would you
19 like to sell one unit or half a unit? I mean, to
20 spread that risk to benefit the investors and the
21 consumers, what would you like to do with it?

22 A. As I said earlier, in the ideal world I'd like to
23 have partners, but if I can't, we're committed to
24 pursuing it in any event. And, clearly, with our

1 pending combination with Progress, then we have a
2 much larger customer base to spread the cost over
3 and in a larger, stronger balance sheet to handle
4 it.

5 Q. And so do you expect after the merger with Progress
6 Energy, that Progress Energy customers would pay
7 for the Lee Station?

8 A. That hasn't been determined yet. The merger hasn't
9 even been approved yet. But I'm just suggesting as
10 we go down this road, we would probably be looking
11 at, you know, joint planning. I mean, there's a
12 lot of joint planning that goes on in North
13 Carolina today, but this would allow kind of joint
14 ownership and spreading it over a much larger
15 customer base. That's the primary -- I mean, we
16 can handle the risk and we can handle the capital.
17 It's a preference to reduce the risk and reduce the
18 capital to any project, but at the end of the day,
19 the real beneficiary is the customer.

20 Q. I appreciate that, Mr. Rogers, but I'm going to
21 have to ask my question one more time. In sitting
22 today, looking at all these discussions that you're
23 having with other utilities and other entities,
24 best case for Duke Energy, what percentage of the

1 Lee Station would you want to have some other
2 partner with?

3 A. I think a direct answer to your question is I don't
4 have any best case, because I live in a world of
5 uncertainty and I live in a world of doing what's
6 possible, and we may be able to get partners or we
7 may not. My preference is to get partners, and I
8 don't know whether it's two or three or what
9 percent, but my preference is to find partners, and
10 if I cannot, we still need to
11 -- we will still pursue it.

12 Q. Now, looking at the Lee Station, you haven't
13 received your Combined Operating License from the
14 Nuclear Regulatory Commission.

15 A. Yes, sir. That's correct.

16 Q. You haven't received a certificate from either the
17 South Carolina Public Service Commission or the
18 North Carolina Utilities Commission.

19 A. Yes, sir. That's correct.

20 Q. Okay. When does Duke expect to apply for the
21 certificate from the South Carolina Public Service
22 Commission?

23 A. I don't know the exact time, but it will be closer
24 to the time when we expect to get the COL.

1 Q. And when will Duke apply to the North Carolina
2 Utilities Commission for a certificate?

3 A. Contemporaneous with that.

4 Q. Has a decision been made by Duke to go ahead with
5 the Lee Station?

6 A. A decision has been made to pursue it, to create
7 the option, and we're on that course. What's key
8 to us is a series of things. One, is we have to
9 get legislation in North Carolina that allows us to
10 track CWIP similar to the legislation that we have
11 in South Carolina. That's a key before we'll move
12 forward. Another key is that we'll continue to
13 look at the demand. I mean, what the recession has
14 done is really reduce our demand and push it out a
15 number of years, but then the question is how fast
16 will the demand grow after that? I'm an optimist
17 because I think our economy will recover and the
18 growth and demand will be significant and that
19 we'll need this plant. But as I said, we're being
20 very careful and moving through this in a cautious,
21 thoughtful, methodical way to kind of minimize the
22 risk for our customers as well as our investors.
23 Q. And part of that is a strategy of spreading the
24 risk with partners or going to the customers for

1 the CWIP payments.

2 A. I think that would be an important -- I think it
3 would be important to have partners for the reasons
4 that I stated, both for customers and investors.

5 Q. Now, if the customers are going to pay for the Lee
6 Station while it's being constructed, do you
7 consider the customers to be your partners in that?

8 A. In a sense of the word they are.

9 Q. Now, looking at the development costs, looking at
10 right now, the estimate is -- by the end of 2013
11 some \$459 billion. Do you expect any additional
12 predevelopment costs after 2013, or do you expect
13 any additional predevelopment costs?

14 A. I mean, it's our best judgment that this is the
15 number -- this is the cost that we need to incur to
16 keep this option alive, tied to getting the COL in
17 2013. I think that Dhiaa Jamil can go into this in
18 more detail as the different components and why we
19 think we need to make -- have expenditures with
20 respect to each of them.

21 Q. Now, at the Edwardsport plant, you proposed a cost
22 cap for the construction --

23 CHAIRMAN FINLEY: Mr. Runkle, how about
24 pulling that mic over in front of you a little bit,

1 please, sir.

2 MR. RUNKLE: Sorry about that.

3 Q. At the Edwardsport plant, you proposed a cost cap
4 for construction. Are you prepared to have a cost
5 cap on predevelopment costs for the Lee Station?

6 A. I haven't really thought about that.

7 Q. Have you thought about having a cap on the costs of
8 construction of the Lee Station?

9 A. I think it would be clearly premature to have a cap
10 on that cost at this time.

11 Q. Now, you had said earlier that looking at the
12 overnight capital cost of the Lee plant was about
13 \$11 billion dollars. Is that correct?

14 A. Yes, sir.

15 Q. Now, for the Commission, what are overnight capital
16 costs?

17 A. That's basically the cost today, if we could build
18 it instantaneously today. It doesn't take into
19 account financing cost and other cost over time.

20 Q. And some of those other costs would be inflation?

21 A. Inflation would be one.

22 Q. Increases in labor costs or component costs?

23 A. Those would be others.

24 Q. Now, so the overnight capital cost for the Lee is

1 \$11 billion.

2 A. Based on today.

3 MR. RUNKLE: I have no further questions.

4 CROSS EXAMINATION BY MR. GREEN:

5 Q. Good morning, Mr. Rogers.

6 CHAIRMAN FINLEY: It's afternoon, Mr.
7 Green.

8 Q. Good afternoon, Mr. Rogers.

9 A. Good afternoon, Mr. Green. It's nice to see you
10 again. I like the tie.

11 Q. Thank you. I think our wives have good taste.

12 A. I am not about to disagree with that.

13 Q. Duke Energy Carolinas is intending to file a
14 general rate case in June of 2011. Is that
15 correct?

16 A. That's correct.

17 Q. And the proposal would be to make the new rates
18 effective as of January 2012. Is that correct?

19 A. That's my recollection, yes, sir.

20 Q. If the interpretation of 62-110.7 is that nuclear
21 development costs can be included in a general rate
22 case prior to the certificate being issued, then
23 these nuclear development costs could be included
24 in Duke's rates as early as 2012. Is that correct?

1 A. If that's -- the reading of the statute is correct,
2 I would guess yes.

3 Q. So wasn't your intention to say that the company
4 intends to wait until the certificate is issued to
5 include these nuclear development costs in its
6 rates?

7 A. I may have misspoken about the timing, but that was
8 my sense of the timing.

9 Q. I just wanted to clarify that.

10 A. That's a good point.

11 Q. The other thing about 62-110.7 is that under
12 subdivision (d), the Commission can include those
13 costs, the nuclear development costs, in a general
14 rate case even if the plant is canceled. Is that
15 correct?

16 A. It's within the discretion of the Commission, yes.

17 Q. I think it probably is a matter of if the
18 Commission is convinced by Duke that those costs
19 were reasonable and prudent rather than a
20 discretionary decision.

21 A. Well, that's what I mean. I mean, in a sense, we
22 have to make a showing that they were reasonable
23 and prudent, and it's in their discretion to
24 determine whether or not it's reasonable and

1 prudent, and that's not a clear, bright line.

2 Q. Well, that's a legal point we can debate later.

3 MR. GREEN: Thank you.

4 MS. RANKIN: I have just a couple of
5 questions.

6 CROSS EXAMINATION BY MS. RANKIN:

7 Q. In your summary, Mr. Rogers, you talked about not
8 relying on a single source and that a diverse
9 portfolio is needed. Without arguing about what
10 the appropriate percentages should be, isn't it a
11 fact that the percentage of Duke's energy produced
12 today without Lee from nuclear plants is 50
13 percent, maybe just over 50 percent, but ballpark?

14 A. Yes, ma'am. That's correct.

15 Q. And with the two new combined cycle plants, the
16 natural gas plants that are under construction,
17 Buck and Lee, isn't it true that the percentage of
18 Duke's energy produced by natural gas will still be
19 less than 10 percent, or maybe close to 10 percent?

20 A. That's correct.

21 MS. RANKIN: I have no further questions.

22 CHAIRMAN FINLEY: Redirect?

23 REDIRECT EXAMINATION BY MS. SHAFEEK-HORTON:

24 Q. Mr. Rogers, are you aware that once construction

1 begins, the Commission periodically reviews changes
2 in cost estimates? Are you aware of that?

3 A. I'm not aware of the specific provision, but I'm
4 aware that generally that is done.

5 Q. And are you also aware that during those reviews,
6 the Commission can approve or disapprove of any
7 change in the cost estimate?

8 A. That's correct.

9 Q. Do you know why Duke was not selected by the
10 Department of Energy as one of the first four
11 recipients of the loan guarantee?

12 A. Actually, I do.

13 Q. Can you tell us why?

14 A. What they tried to do when they picked the first
15 four is to spread it around the country and not be
16 -- and to spread it around different technologies,
17 because we were doing AP1000, SCANA was doing
18 AP1000, Southern was doing AP1000, I think Progress
19 at Levy was doing AP1000. They kind of looked and
20 said, gosh, in the south, and they picked Southern,
21 because Southern was a little further along in
22 their approval process than Georgia, as I
23 understand it. And so they picked Southern in that
24 context, and then they picked other technologies.

1 But we've been told -- and Dhiaa Jamil would know
2 this for sure, but we've been told that we're in
3 the next group, which is about four companies,
4 three or four companies that come behind the first
5 four.

6 Q. I'm going to redirect your attention to the Public
7 Advocacy Groups' Exhibit Number 2. You read
8 previously the statement from Mr. Turner. Is that
9 correct?

10 A. Correct.

11 Q. Do you agree with Mr. Turner's statement that you
12 should plan for 40 to 50 percent cost overruns over
13 current estimates for Lee?

14 A. No, I do not.

15 Q. And can you explain why you don't agree with that?

16 A. Sure. I think there's several explanations for
17 this. First of all, Cliffside and Edwardsport, in
18 my judgment, are two different plants. Cliffside
19 had a reference plant to build against, and that
20 has allowed us to stay on track. Edwardsport did
21 not have a reference plant because we were taking
22 an existing technology and scaling it up. And when
23 we did our original feed study, we had Bechtel, GE,
24 and our own people make their best judgment in

1 terms of what the costs will be, then there's a
2 long conversation as to why the costs escalated up
3 to what they did. But they were designed -- they
4 were building something for the first time at that
5 scale, and that's not unusual when you're scaling
6 any advanced technology. And just go back to the
7 '70's and '80's and there are a lot of examples of
8 that.

9 So I believe that the Cliffside
10 situation, once we came up with the appropriate
11 estimate that was approved by the Commission, that
12 that was tied to detailed work in a reference
13 plant. And the reason I disagree with it is, is
14 because I believe that the AP1000 has been built by
15 SCANA and the design work is complete, and it will
16 be done by Southern before, because even Southern
17 has gotten permission from the NRC even before the
18 COL is issued to do additional work at the site
19 beyond just moving dirt around, that -- and in
20 China, and we're monitoring China, as well as
21 Southern is, and SCANA. We're all working with the
22 Chinese because they're going to build this AP1000
23 in a heartbeat and we're going to know exactly what
24 the cost is there. So we're going to have three

1 plants. It will be easy to understand what the
2 reference plant is.

3 There was a comment made with respect to
4 combined cycle, you know, what their expected cost
5 is. Well, there's a clear reference plant, because
6 that plant -- those plants have been built numerous
7 times and it's fairly straightforward to project
8 what the costs are going to be.

9 So the bottom line is, is I think this
10 statement is wrong, to think that there would be 40
11 to 50 percent above current estimates, particularly
12 if the current estimate is tied to a reference
13 plant.

14 MS. SHAFEEK-HORTON: Thank you. No
15 further questions.

16 CHAIRMAN FINLEY: Questions by the
17 Commission? Commissioner Culpepper.

18 EXAMINATION BY COMMISSIONER CULPEPPER:

19 Q. Mr. Rogers, you mentioned in your testimony about
20 the South Carolina CWIP financing statute that is
21 law in South Carolina, but is not currently law in
22 North Carolina. And did I understand you to say
23 that Duke would not want to proceed with the
24 construction of the Lee plant absent a CWIP

1 financing statute having been enacted by the
2 General Assembly of North Carolina?

3 A. That's correct.

4 Q. Well, in that regard, then, I'm trying to find out
5 where you draw the line. We have an application
6 before us that's asking for approval of, I think,
7 \$267 million worth of costs associated with the
8 plant. In your opinion, would it be prudent for
9 the Commission to approve such an application
10 absent the CWIP statute having been enacted in
11 North Carolina?

12 A. That's a good question. I think at the end of the
13 day, the -- and you're in a better position to
14 project what the Legislature will do than I am --
15 but based on my information, legislation will be
16 passed, maybe not in all likelihood in this
17 session, although the whole Japanese sort of events
18 might delay it, but I am confident that legislation
19 will ultimately be passed in this state either this
20 session or a subsequent session. And this is
21 really based on my team briefing me on the point of
22 view of the key leadership in the Legislature today
23 with respect to that and with respect to other key
24 constituents in the state.

1 Q. Well, of course, at this point in time, although
2 you say you have some confidence in that regard,
3 it's not an accomplished fact at this point, and
4 would you, therefore, concede that the prudence
5 issue in this case is somewhat dependent upon that
6 statute being passed by the General Assembly?

7 A. I think you could interpret it that way, but I
8 think the better interpretation is, is that it's
9 prudent for us to go forward because I believe that
10 North Carolina will ultimately approve this because
11 they want to see nuclear being built because here's
12 the other reality we face -- and it really hasn't
13 come up yet -- even bringing this plant on in 2021,
14 the reality is we shut down the Oconee plant in
15 2030, 2031, so we're starting to shut down our
16 nuclear plants only a decade away. So by starting
17 on this and trying to build these plants, it is
18 very critical, if we're going to replace and
19 modernize our fleet, to be able to do that. And
20 based on every person that I've -- not every
21 person, but many of the people that I've talked to
22 and my team have talked to, they understand that
23 the tracking of CWIP will reduce cost to consumers,
24 and then if we need to build these plants, to

1 modernize our fleet and to get prepared to replace
2 plants that will be shut down. That Oconee plant
3 will be 60 years old in 2030. I don't think that -
4 - although some have discussed it, I don't think
5 they will extend the life beyond 60 years, as a
6 practical point. So I believe that since it is
7 cheaper for consumers, that this bill will pass,
8 and I think more and more legislators have reached
9 that conclusion because the facts speak for
10 themselves.

11 Q. Right. I understand what you say about that, but
12 again, I want to boil it down to an essence here,
13 and that is I'm understanding that at least what
14 you're saying this time is at this time, that Duke
15 would not build this plant absent that CWIP
16 statute.

17 A. That's correct.

18 COMMISSIONER CULPEPPER: Thank you.

19 CHAIRMAN FINLEY: Commissioner Brown-
20 Bland.

21 EXAMINATION BY COMMISSIONER BROWN-BLAND:

22 Q. Good afternoon.

23 A. Good afternoon.

24 Q. My first question for you, Mr. Rogers, is the in

1 service date as it stands now for Lee Station would
2 be 2021. How firm is that date, or is that date
3 subject, in your mind, to be pushed back?

4 A. I think that based on the recovery from this
5 recession, deep recession, I think we'll be back on
6 the road in growth and demand. Couple that with
7 the belief that there is going to be fairly
8 stringent regulations proposed by the EPA that will
9 put pressure on our remaining fleet that hasn't
10 been completely retrofitted yet for SOx, NOx and
11 Mercury, that the combination of those two factors
12 which clearly say we need it.

13 The second thing is, is that one of the
14 things that you have to consider, we came very
15 close to getting carbon legislation in the last
16 session of Congress. I don't think that's going to
17 happen in this session of Congress, but I do think
18 they're seriously considering a clean energy
19 standard which would require a certain percent of
20 your generation to be carbon free, and so then
21 nuclear -- this plant, under such a standard, would
22 be necessary to meet those requirements, unless
23 you're going to do it all with wind or solar. And
24 we know there's no wind in North Carolina. I mean,

1 we know this because we've invested a 1.7 billion
2 to build 1,000 MW of wind, but we haven't built any
3 of it in North Carolina because you can't make the
4 economics work here. And so the important point, I
5 believe, is that we're pretty comfortable that
6 those are the dates that we need to bring those
7 units online.

8 Q. And so would you -- I don't know how to quantify
9 it, but you would say that's a pretty firm date in
10 Duke's mind today?

11 A. It is. Yes, ma'am.

12 Q. All right. And what's Duke's basis for the
13 assumption that the NRC will grant the operating
14 license application to Duke by 2013? How firm is
15 that date?

16 A. Well, I'm -- it's almost above my pay grade to be
17 able to project when a regulatory agency will act,
18 but our --

19 CHAIRMAN FINLEY: Be careful now, Mr.
20 Rogers.

21 THE WITNESS: Huh?

22 CHAIRMAN FINLEY: Be careful now.

23 A. -- but my best guess, and I think Dhiaa Jamil, who
24 works with them on a regular basis, will give you a

1 more detailed answer, but my judgment is, is that
2 it's really based on his assessment and based on
3 where we sit in the queue relative to the other
4 utilities that have proposals before the NRC, that
5 that date is a good date.

6 Q. All right. And then is that date -- do you believe
7 that date would end the development phase of the
8 project in terms of cost recovery?

9 A. Yes, ma'am.

10 Q. Now, is the \$459 million figure that you've
11 requested, is that what Duke perceives at this
12 point to be the maximum amount that would be
13 requested as development?

14 A. That's correct. That assumes that we get the
15 license in 2013.

16 Q. All right. And I think Mr. Runkle had broached
17 this before, but would Duke be willing to have --
18 to cap the development cost at the \$459 million
19 figure?

20 A. I would defer that answer to Dhiaa Jamil, who
21 actually runs our nuclear fleet, and he will be
22 able to give you a more concrete answer to that
23 than I can.

24 Q. And the \$11 billion cost figure for Lee which you

1 discussed with Mr. Runkle, is that -- does that
2 figure include AFUDC?

3 A. No, it does not. That's an overnight cost.

4 Q. What amount of AFUDC would be added to the total
5 cost, if you can give it?

6 A. Well, if we got this provision from the Legislature
7 that allowed us to track CWIP, and we had this
8 lined up in a way that we were able to -- there
9 would be no gaps in the recovery, there would be
10 minimal or no accumulation of AFUDC during that
11 period of time because the cost would automatically
12 -- the financing cost would automatically flow
13 through to the customers, and that translates into
14 a lower cost of the plant when it goes in service.

15 Q. That's if that legislation passes?

16 A. Yes, ma'am.

17 Q. If not?

18 A. If not, you accumulate AFUDC between rate cases.
19 And my bet is, is in that world, when we're
20 building a nuclear plant, we'd be filing a rate
21 case every year to include it in, the CWIP in, and
22 be locked in. I mean, it's the only prudent thing
23 to do when you can't track the cost to try to
24 minimize the ultimate cost impact on consumers.

1 Q. All right. Let me ask you, Duke had received
2 payment for the Jacksonville option. Will that
3 payment be applied towards the development costs?

4 A. I hadn't really thought about that, but if you all
5 think it's appropriate to apply it against it, I'd
6 be good with that.

7 COMMISSIONER BROWN-BLAND: I think that's
8 all I have for now. Thank you.

9 EXAMINATION BY COMMISSIONER JOYNER:

10 Q. Good afternoon, Mr. Rogers.

11 A. Good afternoon.

12 Q. Let me apologize if I'm asking you a question that
13 either Mr. Runkle or Commissioner Brown-Bland asked
14 you, but I just need to be clear in my mind what
15 the reasons are for the slippage in in-service
16 dates from 2018 to 2021. And if I'm asking you to
17 repeat, then please just --

18 A. No, no, no. No one has asked me exactly that way.
19 I think it's a couple things. I mean, one is, and
20 the primary driver is really the recession. We
21 don't think we'll get back to 2007 level until
22 probably 2014 or 15, so when you think about it,
23 it's just kind of shifted our demand growth
24 trajectory kind of out. And when we do the IRP,

1 which Janice Hager is the real expert on, but based
2 on my understanding of it, it shows during that
3 period, 2021, that we need additional capacity, and
4 based on her analysis, it's the best option for us
5 at that time. So it's really kind of tied to --
6 the reason we delayed it is because of the
7 recession and because the demand dropped, and that
8 was the primary driver of that.

9 Q. You talk in your testimony and you had some
10 discussion with Mr. Runkle about your continued
11 look at opportunities for joint ownership or
12 financial arrangements that could be beneficial to
13 your ratepayers. What is the maximum ownership
14 percentage of the Lee Nuclear Station that the
15 company would consider selling to third parties?

16 A. I think -- I mean, the calculus on this is we need
17 the capacity even without partners, so the question
18 is how much of the capacity do we want to sell,
19 because at the end of the day, we're going to have
20 to go find it someplace else.

21 Q. And that's going to be -- that was my follow-up
22 question.

23 A. So we're really -- I mean, on the one hand we want
24 regional generation. On the other hand, we know we

1 need all that generation, so in the ideal world
2 what you'd be able to do is get, you know, a
3 certain amount of generation in another project,
4 and that would make up the difference, so you've
5 spread it. And so if you think about it, if you
6 have three different plants going on and they were
7 coming on at different times, but somewhat
8 contemporaneous, you would spread the ownership
9 across those plants and spread it across those
10 different customer bases combined.

11 Q. I'm going to have to think about that, and I may
12 follow up with Ms. Hager.

13 A. She would be the very best to answer it.

14 Q. But I do need to hear from you what is contemplated
15 by the financial arrangements, other than joint
16 ownership, that would be beneficial to your
17 customers that you referred to in your testimony.

18 A. Well, I mean, the important point is if we have
19 joint ownership, that allows us not to -- the cost
20 increase to the plant would be reduced, the amount
21 of capacity that it got would be reduced, and so
22 you could smooth it out if you had a series of
23 plants coming on, and maybe in the interim you
24 would buy some kind of purchase power to fill the

1 gap as this other capacity comes on. I think the
2 lesson that we learned coming out of the last
3 building cycle is having partners is really very
4 important. And so the reason I'm being -- I'm
5 being reluctant to say one third or one fourth or
6 one half is because I don't know what's do-able,
7 and I'm trying to maintain as much flexibility. I
8 know I need it all. I'd like to get partners, may
9 not be able to get partners. We know JEA has an
10 option. So my bias -- and we have a team that's
11 been working on this for 18 months, trying to find
12 partners, and we have a lot of people that we've
13 talked to and have interest, but it's not the
14 culture of our industry to do joint partnerships
15 historically, and I think we're working to try to
16 create. And there's no mandate to do regional
17 building of nuclear, so what we're trying to do is
18 convince people to join with us in this, and
19 everybody's going, well, Southern's going -- well,
20 I've got ours and SCANA says I've got ours and we
21 don't need it. I mean, everybody wants to do their
22 own, so we believe that regional makes sense, but
23 we believe regional makes sense from the get-go,
24 where we're planning it together and we're working

1 through the process similar to the way we did the
2 option with JEA.

3 Q. And when I hear you talk about regional efforts,
4 that, in my mind, translates to a form of joint
5 ownership. In your testimony you talk about joint
6 ownership or financial arrangement, so I think I
7 understand the concept of joint ownership. What I
8 was asking about is what types of financial
9 arrangements, other than joint ownership, you are
10 pursuing.

11 A. I think the other alterative is probably a purchase
12 power agreement or a unit sale, but they're either
13 going to buy a piece of the capacity or they're
14 going to enter into a PPA where they pay the
15 capacity payments and it becomes a wholesale sale
16 for us, but the costs are properly allocated as you
17 do today between our retail customers and our
18 wholesale customers, and there would be a cost
19 allocation there. But they would be fully
20 allocated. In other words, they wouldn't get a
21 better deal than our retail customers. It would be
22 equal.

23 COMMISSIONER JOYNER: Thank you. That's
24 helpful.

1 EXAMINATION BY COMMISSIONER BEATTY:

2 Q. Good afternoon, Mr. Rogers.

3 A. Good afternoon.

4 Q. You mentioned earlier that the situation with the
5 Japanese facilities, nuclear facilities, might have
6 an impact on the General Assembly's consideration
7 of legislation. How might that situation in Japan
8 impact Duke's decisions regarding nuclear
9 generation?

10 A. Well, I think none of us know yet exactly what has
11 happened in Japan. We have been doing, as an
12 industry, updates twice a day, and Dhiaa Jamil, who
13 will be testifying, has been on every one of those
14 calls, and he will probably be able to give you a
15 more detailed answer with respect to it, but it's
16 my belief that just by listening to the different
17 conversations and different opinion leaders, some
18 are saying slow it down and take a look at this,
19 some are saying we need to continue to move forward
20 because there's nothing about the Japanese
21 experience that's the same here, although there are
22 a number of plants that are just like those plants
23 in the U.S. We don't own any of them. They're all
24 GE facilities. And so there might be additional

1 questions with respect to the operation of those
2 plants, but I think -- I mean, I think that it's
3 just hard to predict what will happen. I think
4 with respect to -- and this really goes back to
5 Commissioner Culpepper's question -- the reason I
6 mentioned that there would be probably some delay
7 in the Legislature, I believe in this session of
8 the Legislature they will put a bill forward and
9 try to move it that will allow for CWIP, the
10 tracking of CWIP on a periodic basis. I just don't
11 think that -- my thinking is, is they were going to
12 actually introduce it this week, and thinking this
13 isn't the perfect time to do it, but they will
14 introduce it before this session is over. But
15 clearly, Mr. Jamil is the person who has really
16 paid -- he can give you a more refined answer than
17 this.

18 COMMISSIONER BEATTY: Thank you, sir.

19 CHAIRMAN FINLEY: Mr. Rogers, just a
20 follow-up on Commissioner Culpepper's question and
21 Commissioner Beatty's question.

22 EXAMINATION BY CHAIRMAN FINLEY:

23 Q. You want legislation from the North Carolina
24 General Assembly that mirrors the CWIP recovery

1 legislation in South Carolina. You don't have it
2 now. Would recovery and development cost -- we're
3 incurring development cost now with an in-service
4 date -- well, with a finite time for you to get a
5 license in 2013. Now, if you don't get the
6 legislation that you want in North Carolina in
7 2011, and you say that that's necessary for you to
8 proceed with the Lee plant, I mean, at some point
9 we've got to stop incurring the development cost, I
10 would think. Is that correct?

11 A. That's fair, but I think that we're -- I think that
12 the Legislature is moving in the direction of
13 approving the tracking provision, and I just --
14 from a customer perspective, from an investor
15 perspective, it makes imminent sense, and I think
16 it will be approved, because at the end of the day,
17 one of the reasons that we have some of the
18 cleanest energy in the country, in North Carolina,
19 some of the lowest cost energy is because those
20 that came before us stepped up in the '60's and the
21 '70's and '80's and built these plants. And this
22 generation has the responsibility to really step up
23 and make those decisions, and we're prepared to do
24 that, but one of the lessons we learned, and I went

1 back and looked -- that's why I did the '67, '87
2 look. One of the things that became crystal clear
3 to me is that that was a period where the growth
4 and demand was at 5 percent annually. We're not
5 going to see that kind of growth and demand in the
6 future. It's going to be a mix of modernization
7 and growth. I believe that the Legislature will
8 ultimately embrace this because it's the low-cost
9 alternative for consumers, and they can clearly see
10 around the corner that we're going to be retiring
11 all these plants. And if the answer is to build
12 coal plants or gas plants, we're clearly not going
13 to do it with wind in North Carolina, and maybe
14 some solar, and you all have given us an
15 opportunity, which I am thankful for, to experiment
16 by putting solar on the rooftop. I just believe
17 that there will be legislation. So in a sense, I
18 mean, what we're really trying to do is move the
19 ball forward to achieve the building of this plant,
20 and there are a lot of moving parts. Can we get
21 partners? Can we get the legislation? Will we get
22 the COL in 2013? Will we get a CPCN? I mean, all
23 that is in front of us, but I do think it's all
24 going to come together because if we don't do this,

1 maybe is the better way to talk about it, we lose
2 this option. And if you lose this option, the
3 reality is you're going to build coal plants,
4 you're going to build gas plants. And we haven't
5 gotten into a discussion about the risk associated
6 with gas -- maybe it's not clear whether shale gas
7 is real or a mirage -- but the IEA, which was
8 quoted earlier, is predicting that 37 to 40 percent
9 of all the generation in this country will come
10 from natural gas. So my only point is, is that if
11 we don't move forward in the way we're moving
12 forward, we lost the option. If we lose the
13 option, then we're left with the other
14 alternatives. I don't think that's good public
15 policy and I don't think it leads to a portfolio
16 approach. And more importantly, it puts us in a
17 very tough spot as we retire nuclear in 2030.

18 Q. I understand that you're being optimistic that
19 you'll get the legislation that you anticipate you
20 will get in this upcoming General Assembly, but our
21 concern -- my concern would be if you don't get it,
22 in spite of your optimism, and you say that you
23 need the legislation to continue, move forward with
24 the Lee plant, it looks like to me without that

1 sine qua non that you need, then we need to start -
2 - stop incurring development cost, if that's Duke's
3 position.

4 A. Well, I think what that does is, is that eliminates
5 the option. And as I said a few moments ago, if
6 you didn't have a tracker on CWIP, you'd be forced
7 to file a rate case every year, --

8 Q. I understand.

9 A. -- year after year after year, and I just don't
10 think -- I mean, that's the other option that we
11 have. And, you know, I have felt very strongly
12 about the position with respect to the Legislature,
13 and I think if the Legislature says no, they're
14 saying no to nuclear in the future in this state.

15 Q. Gotcha. You talk about -- I think in your IRP and
16 Duke's testimony in this case it says projections
17 indicate that it needs the output of the Lee units,
18 but at the same time you're talking about partners
19 and providing to those partners some of the output
20 of those units. Can you enlighten us at all about
21 how would you -- you would replace the power that
22 you project you'll need from the Lee plants if it's
23 5, 10, 15, 20 percent?

24 A. We would have to enter into contracts to purchase

1 power from others. I mean, a purchase power is
2 kind of the easiest kind of alternative, rather
3 than building other facilities. But, again, I
4 mean, that is -- I mean, I would ask you to talk to
5 Janice Hager in detail because she's looked at all
6 these different scenarios. But my judgment is, is
7 we know we need it all, but we'd rather build it in
8 a partnership. And if it means start to build that
9 plant with partners, we have to somehow bridge it
10 until another nuclear unit comes on, that would be
11 the approach that we would take in the ideal world.

12 Q. Let me ask a question or two about your arrangement
13 with Jacksonville, Florida. If you get this option
14 payment of \$7.5 million, will that be credited
15 toward the power -- will that be credited toward
16 the company's nuclear development costs, or what
17 are you going to do with that from an accounting
18 perspective?

19 A. I'd have to talk to my team about this, but I'm
20 prepared to say we'll credit it. I'm looking at my
21 team now to see if they're going to shoot me.

22 Q. And if you enter into an arrangement with
23 Jacksonville, how will you get the power down
24 there?

1 A. I think our team has looked at the transmission
2 capability, and I think there's a belief that power
3 can be transmitted to them.

4 Q. Do you know the month and year that you expect that
5 option period to begin and end?

6 A. I don't know the exact -- how long the option is.
7 I can't recall the details of the option. A
8 significant part of it is confidential in terms of
9 how we structured it with them, but basically they
10 get 5 to 20 percent, and they have to pull the
11 trigger right after we get the COL.

12 CHAIRMAN FINLEY: All right. Yes, ma'am?

13 COMMISSIONER JOYNER: Thank you, Mr.

14 Chair, and there was one question that I wished to
15 ask of Mr. Rogers that I neglected to earlier.

16 REEXAMINATION BY COMMISSIONER JOYNER:

17 Q. Mr. Rogers, you were here, I believe -- you have
18 been here since the Chairman called this docket to
19 order this morning. Isn't that right?

20 A. I've been here all morning.

21 Q. Okay. And you've heard the testimony from the
22 public witnesses.

23 A. I did, indeed.

24 Q. One of the refrains that many of the public

1 witnesses presented is something that is almost
2 conspicuous in its absence from your comments
3 today, and that is -- I mean, we've talked about
4 modernizing your fleet, but what we heard from many
5 of the customers this morning was that perhaps a
6 more cost effective or environmentally conscious
7 way of meeting the demand is through energy
8 efficiency. Other than building new nukes, other
9 than using natural gas-fired generation, how do you
10 respond to those customers? What role doe the
11 company reasonably expect energy efficiency to
12 play, and what can the company do to increase its
13 importance in the mix?

14 A. Madame Commissioner, I want to thank you for asking
15 me that question because I sat here and listened
16 this morning very carefully, and virtually
17 everybody mentioned energy efficiency, everybody
18 talked about renewables. And energy efficiency is
19 something that I feel very strongly about because I
20 think it's a very important part of the equation.
21 One example of that is, is that we have the project
22 that you all have approved called Envision
23 Charlotte, where we've taken 15 million square feet
24 of downtown office space and we're going to try to

1 reduce their usage 20 percent in the next five
2 years. And that is just one example of things that
3 we're doing.

4 In the McAlpine area in south Charlotte,
5 we have 100 families who are doing tests, and we're
6 doing things like with remote sensing devices,
7 where if somebody turns on their dishwasher, it
8 doesn't come on automatically. It's delayed for 30
9 seconds or more. It sends a signal to the
10 refrigerator, which starts to cycle down, and then
11 as it cycles down, the dishwasher comes on, and
12 then the dishwasher finishes and sends a signal and
13 the refrigerator cycles up. So we've been able, by
14 using sensing devices, by testing our customers
15 with questionnaires every week, do they see any
16 difference in quality of service because we're
17 using technology. And the reality is, is they saw
18 none, and what we were able to do was reduce the
19 peak 20 percent just in terms of using technology
20 in a smart way. So that's another example.

21 We are very committed to renewables.
22 We're the only company east of the Mississippi --
23 there is only one other company in the country --
24 as you might imagine, it's California -- that has

1 proposed to put solar on the rooftop and to --
2 where we would pay the customer essentially as if
3 it's a power plant site, and we would invest,
4 install, maintain and operate, and then we would
5 roll the cost of solar into our low-cost nuclear
6 and hydro and coal fleet. And we were
7 oversubscribed. We asked for 100 million, we got
8 50, and we were able to deliver 10 MW at \$42
9 million because that was a period when there's an
10 oversupply of panels and we were able to get them
11 very, very cheap.

12 We are prepared to do more in terms of
13 installing renewables like solar because it not
14 only teaches us how to operate a system with a
15 distributed generation, but how to operate a system
16 with intermittent power sources. So we're trying
17 to do as much as we can, and I know some have said
18 we shouldn't be continuing to push the Commission
19 on these issues, but we think it's important to
20 continue to push the edge on energy efficiency, on
21 renewables, and I can envision a day where we will
22 be an optimizer of electricity within the homes,
23 within the businesses, because we can do it at a
24 lower cost of capital, we have relationships with

1 the customers, they trust us, and we can do it in a
2 way -- I believe that in the future, if you allow
3 us to make the investments in technology in the
4 energy efficiency area, that what we do today for
5 energy efficiency will be primitive when we look
6 back 10 years from now.

7 So I think the opportunities are huge. I
8 thought what the people said today totally
9 resonated with me in terms of renewables and energy
10 efficiency, but having heard it, having had it
11 resonate, having believed it, it's not the only
12 answer. It's not the sole answer. It's really a
13 blend. It's all the above, I mean, because we're
14 in a period where the average age of our plants is
15 40, as I said earlier, and we're going to have to
16 start retiring and replacing them. So you're
17 looking at a CEO -- you're looking at a company
18 that's very committed to energy efficiency, very
19 committed to renewables. I mentioned 1,000 MW,
20 tenth largest supplier of wind in the United States
21 today. We're very committed to that and we're
22 always pushing the edge to get the approval so we
23 can be even more aggressive on energy efficiency in
24 the future.

1 COMMISSIONER JOYNER: Thank you.

2 REEXAMINATION BY COMMISSIONER BROWN-BLAND:

3 Q. Mr. Rogers, you responded to the Chair a minute ago
4 that if part of the Lee Station was sold to joint
5 owners, that you would have to look to power
6 purchase agreements to replace that part of the
7 load. Is that really -- a power purchase agreement
8 is really a good substitute for base load
9 generation?

10 A. It's not a perfect substitute, but it would be a
11 bridging that we would have to do. I mean, in the
12 ideal world -- and we can't turn the clock back,
13 but if we could have turned the clock back three to
14 five years ago, we got all the companies in North
15 Carolina and South Carolina and Georgia, maybe, to
16 sit down and say, okay, what do we need to build,
17 and then we jointly built it, so we'd own a piece
18 of Vogtle, we would own a piece of Summer, they
19 would own a piece of Lee. To me, that would have
20 been the ideal approach, but that didn't happen.
21 So now what we're trying to do, Southern is off
22 doing their own thing, Summer and Santee Cooper's
23 off doing their own thing, and they didn't invite
24 us to the party, Southern didn't invite us to the

1 party, and we tried to invite people to our party
2 because we think that regional generation makes
3 sense. Yes, we believe it. Yes, we're trying to
4 make it happen, but at the end of the day, we
5 can't. We will have the capability to do it
6 ourselves because we have a strong balance sheet
7 and use all the demand. And if the combination is
8 ultimately approved, the combined company will
9 clearly have the capability to build it and spread
10 it over a much larger customer base in North and
11 South Carolina. So I believe that this proposed
12 merger that will soon be pending before you, I
13 believe that merger, interestingly enough, is
14 another way to skin the cat in terms of regional
15 generation because it's all about a bigger balance
16 sheet, although we're not diversifying as much for
17 investors, but we're clearly achieving the customer
18 benefit of spreading it over a much bigger customer
19 base, and that is really a very important
20 consideration. So if we can spread it over a
21 larger customer base and we can get the tracking on
22 CWIP, we'll minimize the cost impact of nuclear on
23 our customers.

24 Q. If we are successful in the regional cooperation

1 and the joint ownership efforts, when -- and I
2 understand that we -- the company would then try to
3 replace that power with purchase power agreements,
4 but where does that leave us in terms of an
5 evaluation of the base load generation? Would we
6 then be in a position we'd need to come back
7 proposing more base load facilities?

8 A. It would be a Band-Aid. It would simply be a Band-
9 Aid. And I would suggest -- I mean, Janice Hager
10 has run a lot of scenarios and thought about this,
11 so in a sense, it's a balancing act for us. Yes,
12 we want regional partners. At the same time, we
13 need all the capacity. And so, again, it's not
14 simply black or white. It's really kind of -- it's
15 a very complicated set of tradeoffs that we're
16 trying to do, and that's true with respect to the
17 question on our position with respect to getting
18 legislation, it's true about partners. And so
19 we've tried to be incredibly careful and prudent,
20 because when we did that study of the 20-year
21 period in North Carolina and South Carolina when we
22 built this, we really studied it, we really
23 learned. And the truth of the matter is the
24 experience in Indiana, we've really learned in

1 terms of how to do it and how to make sure you
2 minimize the cost impact on consumers. And in
3 Indiana they have tracking. Good thing. And the
4 thing that we didn't have in Indiana was a
5 reference plant, and that's a bad thing. And so my
6 only point I'm making is, is that we haven't built
7 base load units in 30 to 40 years. That generation
8 of workers, most of them have left our company, and
9 now I want to make sure that we don't -- that we
10 remember the lessons learned and we do it the smart
11 way. So what we're proposing to you, I think, is
12 prudent, a way forward, and I think it's consistent
13 with our expectations on the COL, I think it's
14 consistent with our expectations on getting the
15 right legislation in North Carolina. So I think
16 all those things are coming in line, but they have
17 to -- it all has to come together, and if it
18 doesn't come together, we lose an option, and I
19 think that sets the state of North Carolina back in
20 a dramatic way.

21 COMMISSIONER BROWN-BLAND: Thank you.

22 EXAMINATION BY COMMISSIONER ALLEN:

23 Q. Good afternoon. Although I know we're talking
24 about the reasonableness and the prudence of the

1 predevelopment costs that you are asking us to take
2 a look at, you did mention that you're not going to
3 see the 5 percent growth that we have in the past.
4 Was that in energy production or customer base?

5 A. That was in the demand for electricity.

6 Q. Demand. In light of that, and I may have to ask
7 someone more technically, but from a policy point
8 of view, you talked about the new mix of
9 modernization and diverse power sources. I don't
10 remember the second part.

11 A. No. It's -- what I think I said was the need to
12 modernize, plus the load growth, which won't be as
13 robust as it was in the '60's and '70's, but
14 nonetheless, will be there, that that combination
15 really pushes us toward making plans to build new
16 base load.

17 Q. Thank you. And one final question following that.
18 To what extent are you factoring in the anticipated
19 growth that we've been looking at of an additional
20 3 million people in North Carolina by 2030?

21 A. Well, I think that is clearly -- that's factored
22 into our analysis. And the person that can really
23 confirm that the best is Janice Hager. But I'm
24 sure we have -- we saw during the recession a

1 slowdown in new customers, and that will start to
2 pick up as we come out of it because we're seeing a
3 significant -- you've hit on a very important
4 point, the migration of people into North Carolina,
5 I don't think that slows down, and I think that's
6 just -- that will only add to the load growth. How
7 much it will add is -- because it will be offset --
8 that load growth will be offset a little bit by how
9 much energy efficiency we do. It will be offset a
10 little bit about how appliances become more
11 efficient. So there are a variety of things that
12 will dampen that load growth, but it's inevitable.

13 COMMISSIONER ALLEN: Thank you.

14 CHAIRMAN FINLEY: Questions on the
15 Commission's questions?

16 MR. RUNKLE: If I may just have one, sir.

17 CHAIRMAN FINLEY: Be quick. I'm getting
18 hungry, Mr. Runkle.

19 RECROSS EXAMINATION BY MR. RUNKLE:

20 Q. Mr. Rogers, in looking at Hager Exhibit B, which is
21 looking at the 2011 capacity and energy, and in her
22 Exhibit C, which is the 2030 capacity and energy,
23 you -- in the 2011, Duke's demand-side management
24 energy efficiency for energy is .4 percent, and in

1 19 years it goes up to 4 percent, combining that
2 with the DSM. Can Duke do better than that? I
3 mean, you've speculated to the Commission, or
4 you've testified to the Commission that Duke is
5 really looking for that, but in your planning it
6 seems to me fairly small.

7 A. I think the comparison you need to make -- and I
8 get the point, it's rather small. It's only small
9 relative to the total, but if you look at percent
10 gain, it's a pretty significant percentage
11 increase. But the way to really do a good
12 comparison of whether this is an aggressive number
13 or not is to compare it to what the IEA says or the
14 EPRI study in terms of the amount of energy
15 efficiency or demand-side management that will
16 occur by 2020 or 2030. So if you go to the EPRI
17 study, because I know they break this out
18 specifically, I don't recall whether this 4 percent
19 is more aggressive or less aggressive than what
20 EPRI is predicting, but I think that if we are
21 projecting 4 percent, I think Janice would probably
22 tell you it's fairly aggressive, but from a CEO
23 perspective, I think we ought to continuously look
24 for more and more ways. And if we can beat the 4

1 percent, we ought to beat the 4 percent, try to
2 beat the 4 percent. I just think that as I listen
3 to the -- our customers and the people that were
4 here today, I get it in terms of the importance of
5 energy efficiency and the role that it plays. And
6 the more we do, the better.

7 MR. RUNKLE: I have no further questions.
8 Thank you.

9 CHAIRMAN FINLEY: All right.

10 MS. SHAFEEK-HORTON: Excuse me.

11 REDIRECT EXAMINATION BY MS. SHAFEEK-HORTON:

12 Q. In terms of regional generation, is Duke also
13 seeking partnerships with other entities that are
14 considering new nuclear?

15 A. We are.

16 Q. Is it possible in the 2021 time frame to replace
17 the capacity of a Lee Nuclear Station with
18 renewables and EE?

19 A. That is not possible.

20 Q. Do you know whether nuclear is still the least-cost
21 option when compared to solar and wind?

22 A. It is the least-cost option, and when you compare
23 the government subsidies, nuclear has much -- the
24 subsidies are much less when compared to the

1 subsidies that come with solar and wind.

2 MS. SHAFEEK-HORTON: Thank you.

3 CHAIRMAN FINLEY: All right. Thank you,
4 Mr. Rogers. We appreciate your time. We're going
5 to have a lunch recess until 2:30.

6 THE WITNESS: Thank you all very much.

7 MS. SHAFEEK-HORTON: May he be excused?

8 CHAIRMAN FINLEY: He may be excused.

9

10 THE HEARING WAS RECESSED AT 1:10 P.M.,

11 TO BE CONTINUED AT 2:30 P.M.

12

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-7, Sub 819 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 23rd day of March, 2011.



Linda S. Garrett
Notary Number 19971700150
Notary Public for the State of
North Carolina

FILED

MAR 29 2011

**Clerk's Office
N.C. Utilities Commission**