

1 PLACE: Held Via Videoconference

2 DATE: Friday, September 4, 2020

3 TIME: 8:31 A.M. - 1:00 P.M.

4 DOCKET NO.: E-7, Sub 1214

5 E-7, Sub 1213

6 E-7, Sub 1187

7 BEFORE: Chair Charlotte A. Mitchell, Presiding

8 Commissioner ToNola D. Brown-Bland

9 Commissioner Daniel G. Clodfelter

10 Commissioner Lyons Gray

11 Commissioner Kimberly W. Duffley

12 Commissioner Jeffrey A. Hughes

13 Commissioner Floyd B. McKissick, Jr.

14

15 IN THE MATTER OF:

16 DOCKET NO. E-7, SUB 1214

17 In the Matter of

18 Application by Duke Energy Carolinas, LLC,

19 for Adjustment of Rates and Charges Applicable to

20 Electric Utility Service in North Carolina

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DOCKET NO. E-7, SUB 1213

In the Matter of

Petition of Duke Energy Carolinas, LLC,  
for Approval of Prepaid Advantage Program

DOCKET NO. E-7, SUB 1187

In the Matter of

Application of Duke Energy Carolinas, LLC,  
for an Accounting Order to Defer Incremental Storm  
Damage Expenses Incurred as a Result of Hurricanes  
Florence and Michael and Winter Storm Diego

VOLUME 13

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

2 CHAIR MITCHELL: All right. Good morning,  
3 everyone. It is a little after 8:30, so we will go ahead  
4 and get started. Let's go back on the record, please.  
5 We will begin this morning with the Public Staff's cross  
6 examination of the Hager/Pirro/Huber panel, and I believe  
7 Ms. Edmondson, we are with you.

8 MR. SOMERS: Chair Mitchell?

9 CHAIR MITCHELL: Yes. I believe that's Mr.  
10 Somers. Is that -- am I right?

11 MR. SOMERS: Yes.

12 CHAIR MITCHELL: Okay.

13 MR. SOMERS: Yes, ma'am. This is Bo Somers. I  
14 have one quick preliminary matter, if that's okay.

15 CHAIR MITCHELL: Okay. Proceed, please.

16 MR. SOMERS: Okay. So the panel for the  
17 Company that will follow the panel that's up now is Ms.  
18 Barnes and Mr. Schneider.

19 CHAIR MITCHELL: Okay.

20 MR. SOMERS: And the only party that indicated  
21 cross for Mr. Schneider was the Attorney General's  
22 Office. Ms. Force let me know last evening that they  
23 decided not to cross him, so I wanted to alert the  
24 Commission. So to the extent that the Commission may

1 have questions, obviously, we'll be happy to have Mr.  
2 Schneider appear. To the extent the Commission did not  
3 have questions for him, we could ask to excuse him and  
4 put his testimony into the record as a matter of just  
5 shortening the time that we're on today.

6 CHAIR MITCHELL: Okay. Let me -- I will ask my  
7 colleagues at this point in time if anyone has questions  
8 for witness Schneider?

9 (No response.)

10 CHAIR MITCHELL: Commissioners, anyone have  
11 questions?

12 COMMISSIONER McKISSICK: No questions.

13 MR. MOORE: Madam Chair, this is Tirrill Moore  
14 with Justice Center, et al.

15 CHAIR MITCHELL: All right. Mr. Moore, you may  
16 proceed.

17 MR. MOORE: We actually have a few questions  
18 for Mr. Schneider. I hate to drag him in here just for  
19 that, but I believe we did indicate that we would have a  
20 few questions for Mr. Schneider as well.

21 MR. SOMERS: My apologies, Chair Mitchell and  
22 Mr. Moore. I thought your questions were for Ms. Barnes  
23 on prepay, so we'll be happy to have him on.

24 CHAIR MITCHELL: Okay. All right. Well, we'll

1 go ahead and proceed with the Barnes/Schneider panel as  
2 planned. Any other preliminary matters before we get  
3 started?

4 (No response.)

5 CHAIR MITCHELL: Hearing none, Ms. Edmondson,  
6 you may proceed.

7 JANICE HAGER, LON HUBER,  
8 and MICHAEL J. PIRRO; Having been previously affirmed,  
9 Testified as follows:

10 CROSS EXAMINATION BY MS. EDMONDSON:

11 Q Good morning. I'm Lucy Edmondson with the  
12 Public Staff. And as Ms. Downey indicated yesterday, my  
13 questions are directed to Mr. Pirro. Good morning, Mr.  
14 Pirro. Mr. Pirro, you're familiar with the settlements  
15 between Duke Energy Carolinas and Harris Teeter and Duke  
16 Energy Carolinas and the Commercial Group?

17 A Yes, I am.

18 Q All right.

19 MS. EDMONDSON: I'd like to mark Public Staff  
20 38 as Public Staff Pirro/Hager Cross Examination Exhibit  
21 Number 3 and Public Staff 39 as Public Staff Pirro/Hager  
22 Cross Examination Exhibit Number 4.

23 CHAIR MITCHELL: All right, Ms. Edmondson. The  
24 documents will be so marked.



1 (Whereupon, Public Staff Pirro/Hager  
2 Cross Examination Exhibit Numbers  
3 3 and 4 were marked for  
4 identification.)

5 Q And Mr. Pirro, Public Staff Pirro/Hager Cross  
6 Examination Exhibit Number 3 is the original Settlement  
7 Agreement between Duke Energy Carolinas and Harris  
8 Teeter, correct?

9 A I have that.

10 Q Excuse me?

11 A I have that -- yes. I have that in front of  
12 me.

13 Q Okay. And Mr. Pirro, Public Staff Pirro/Hager  
14 Cross Examination Exhibit Number 4 is the original  
15 Settlement Agreement between Duke Energy Carolinas and  
16 the Commercial Group, correct?

17 A Yes. That is correct.

18 Q And would you agree that these two settlements  
19 are very similar?

20 A Yes, they are.

21 Q Now, the provisions of the two settlements I'd  
22 like to discuss involve rate OPT-V.

23 MS. EDMONDSON: Madam Chair, I'd like to mark  
24 Public Staff 40 as Public Staff Pirro/Hager Cross

1 Examination Exhibit Number 5.

2 CHAIR MITCHELL: All right. The document will  
3 be so marked.

4 (Whereupon, Public Staff Pirro/Hager  
5 Cross Examination Exhibit Number 5  
6 was marked for identification.)

7 Q Mr. Pirro, do you have that exhibit before you?

8 A Yes, I do.

9 Q And Mr. Pirro, would you agree this cross  
10 examination exhibit is not the complete set of proposed  
11 rates, but the first page of Exhibit B to the Application  
12 as well as the tariff for OPT-V?

13 A Yes. That is correct.

14 Q And Mr. Pirro, could you give us a general  
15 description of the OPT-V rate?

16 A Sure. Well, the OPT-V rate was developed back  
17 out of case -- I believe it was Docket E-7, Sub 1026. It  
18 was a combination of OPT-G, H, and I, and this new OPT-V  
19 offering was formed. There was a fully vetted process  
20 with CUCA and CIGFUR as part of that, along with Public  
21 Staff. And this design has seven different options based  
22 on voltage level, Transmission Primary and Secondary, and  
23 within the Primary and Secondary offerings there's three  
24 different size levels, Small, Medium, Large.

1 Q Okay. And what is the OPT-VSS rate?

2 A That would be Secondary service Small customer.

3 Q And on that exhibit -- Cross Examination  
4 Exhibit Number 5, where is the VSS rate on the tariff  
5 page?

6 A That would be on page 2.

7 Q Okay. And is that at Roman Numeral III?

8 A That is correct.

9 Q And we are only discussing the -- the  
10 Settlement Agreements only deal with the Small; is that  
11 correct?

12 A Yes. The Settlement Agreements with the  
13 Commercial Group and Harris Teeter deal with Secondary  
14 Small.

15 Q And would I assume that they are -- they only  
16 fall under that category?

17 A That is correct.

18 Q All right. In the two Settlement Agreements  
19 that we have marked as Public Staff Pirro/Hager Cross  
20 Examination Exhibits Number 3 and 4, paragraph -- if you  
21 could look at paragraph 2 of each of those agreements.

22 A Yes. I have that in front of me.

23 Q They both state that any Grid Improvement Plan  
24 cost allocated to OPT-V customers shall be recovered

1 through the OPT-V demand charges?

2 A Yes. That is correct.

3 Q Could the demand charges be avoided by the  
4 OPT-V customer?

5 A Was the question can the demand charges be  
6 avoided?

7 Q Yes. Could they avoid the demand charges to  
8 some extent?

9 A No.

10 Q Couldn't they lower their peak demand?

11 A Yeah. They could lower their peak demand, but  
12 the customers within this Secondary Small are generally  
13 similar type of customers who are typically high load  
14 factor customers.

15 Q Wouldn't you agree that the higher the demand  
16 charge, the more cost that they could avoid?

17 A If I heard the question correctly, the higher  
18 the demand charge, the more cost that they could avoid.  
19 Well, if they were to reduce any demand billed units,  
20 then, yes, they could reduce cost.

21 Q It's simple logic, right?

22 A (Witness nods affirmatively.)

23 Q And wouldn't this provision also lower the  
24 energy charge for all hours?

1           A     No. So this section to the settlement is  
2     referring to how the Company would recover Grid  
3     Improvement Plan cost, and so for the OPT-V class, since  
4     these customers have demand meters and they're billed on  
5     demand, we find it reasonable to be able to allocate and  
6     recover those costs through a demand bill type component.

7           Q     So are they all going to be recovered through  
8     these customers one way or the other?

9           A     All OPT-V customers, whether they're  
10    Transmission, Primary, or Secondary Serve, any Grid  
11    Improvement Plan cost would be recovered via demand  
12    charge.

13          Q     And none of these charges would be recovered  
14    from any other customers?

15          A     That is correct. Any cost allocated to OPT-V  
16    would be recovered via demand, and there would be no  
17    subsidization to any other customers within any other  
18    classes.

19          Q     And if we could look at paragraph 3 of both of  
20    these agreements regarding the OPT-VSS rate.

21          A     Yes. I'm looking at that now.

22          Q     The off-peak energy charge is set at 3.0222  
23    cents per kWh and the on-peak rate shall be increased at  
24    half a percent?

1           A     Yes. What that section says is that the off  
2 peak would be set at .030222, and the on-peak energy  
3 shall be increased by a percentage amount that is equal  
4 to half of the overall percentage increase awarded to the  
5 OPT-V Secondary Small rate schedule.

6           Q     Now, did DEC already include this provision in  
7 the interim rates it filed August 13th, 2020?

8           A     Yes, it did.

9           Q     And that only applied to VSS Small customers;  
10 is that correct?

11          A     That is correct.

12          Q     And the Medium and Large customers, their rates  
13 in the interim rates, they went up more than --

14          A     Yes. And Ms. Edmondson, it's important to know  
15 that -- so like when we do rate design, it's a zero-sum  
16 gain, so within the OPT-V class, Secondary Small has its  
17 own revenue requirement, so those customers being served  
18 under Secondary Small, it's just how we have agreed to  
19 recover those revenues, so there's no shifting of  
20 revenues or recoveries to any other customers within any  
21 other -- any of the other six options within OPT-V.

22          Q     Without these settlements, the off-peak energy  
23 charge would have been higher than 3.0222 cents, wouldn't  
24 it?

1           A     Actually, that's a great question. And, you  
2     know, I'm glad you brought that up. Actually, no. When  
3     I go -- when I went back and took a look at our original  
4     filing, the intent of the OPT-V class was to offer  
5     attractive off-peak energy pricing for customers to run  
6     their operations more efficiently -- remember, these are  
7     high load factor type customers -- and to allow them to  
8     plan their business operations, shift load maybe more to  
9     the off peak. That was the spirit and the intent of the  
10    original 2014 OPT-V final offering. So in our previous  
11    rate case, we used a 4-to-1 percent ratio increase in the  
12    on peak 4 percent, off peak 1 percent. With this case we  
13    applied more a uniform increase to both on peak/off peak.  
14    In looking back at that, this agreement is more in line  
15    with the true intent of the OPT-V offering.

16                So I've agreed, and actually this is a 2  
17    percent increase based on the settlement terms to the  
18    off-peak rate, and based on the final award of the  
19    revenue requirement OPT-V on peak would be increased 50  
20    percent of that overall percentage increase.

21           Q     Did you only do this for the Small customers?

22           A     Within this settlement we did, but, you know, I  
23    am totally open to taking a look at all the OPT-V  
24    off-peak rates and adjusting that during our compliance

1 filing.

2 Q And is this -- do you need to look back at any  
3 of the other rate schedules besides OPT-V?

4 A No, Ms. Edmondson. No.

5 Q All right.

6 A And I know listening to -- if I may just, you  
7 know, interject here for a second, listening to Mr.  
8 Floyd's testimony, I know he had concerns about the  
9 comprehensive rate study and, you know, setting a price.  
10 By no means does this exclude any of the seven different  
11 options within OPT-V from being part of any comprehensive  
12 rate study. This is just for this moment in time while  
13 these rates are in effect.

14 Q But how did you come to settle on the 3.0222 as  
15 being a correct number?

16 MS. JAGANNATHAN: Objection. I don't want Mr.  
17 Pirro to get into the confidential settlement  
18 discussions.

19 Q Well, can I ask, is there any basis? Is there  
20 a calculation that supports it as being based on  
21 particular data? Is it just an agreed-upon number?

22 CHAIR MITCHELL: Mr. Pirro, if you can answer  
23 the question without -- answer Ms. Edmondson's questions  
24 without going into confidential information, please do



1 so.

2 A Sure. As I previously mentioned, Ms.  
3 Edmondson, you know, the spirit and the intent of the  
4 OPT-V class is to provide attractive off-peak pricing for  
5 customers to make business decisions in their operations  
6 accordingly. The increase to .030222 was a 2 percent  
7 increase which puts that off-peak energy in a very  
8 attractive price and along with an increase that's in  
9 line with our previous rate case compliance filing.

10 Q But that's the only rate that you decided to  
11 apply just a 2 percent increase to?

12 A So the way this section reads for Harris  
13 Teeter, Section 3, is that 2 percent was applied to the  
14 off-peak energy rate, 50 percent of the overall  
15 percentage increase to OPT-V Secondary Small; 50 percent  
16 of that percentage increase will go to the on peak, and  
17 then the remaining revenue requirement would be collected  
18 via demand charges.

19 Q All right.

20 A Yeah. Ms. Edmondson --

21 Q I'm sorry. Go ahead.

22 A I was going to say, Ms. Edmondson, actually,  
23 I'm like very comfortable with where these rates have  
24 fallen out, and like I mentioned, within the compliance

1 filing I would be more than agreeable to address the  
2 other off-peak energy rates because they all should be in  
3 line with the original intent of the rate offering.

4 Again, this rate offering is well received by  
5 our Large Commercial/Industrial customers.

6 Q Now, you've also put a constraint on how much  
7 the on-peak energy charges could go up; is that correct?

8 A Yes, I did. And that was to, again, to stay in  
9 line with the current integrity of the rate structure and  
10 the differentiation between on peak and off peak.

11 Q And the annual fuel charges -- fuel costs are  
12 recovered through the OPT-V energy charge?

13 A There is a -- yes. There is a base component  
14 of fuel that is recovered within all our energy charges.

15 Q Isn't it true that besides the cost of fuel,  
16 there are other items typically recovered in the energy  
17 charge, such as fixed demand cost and variable O&M and  
18 other costs that vary per unit of consumption?

19 A Yes. That is correct. You know, because  
20 there's different types of customers within our -- like  
21 we don't have one rate for each customer we serve, right?  
22 Our rates, again, are designed to be fair, just, and  
23 reasonable for a segment of customers within a rate  
24 schedule. So there are some other components within the

1 energy charge, but the energy charge as proposed are  
2 above the base fuel component.

3 Q If there is an increase in fuel cost that are  
4 above the current fuel rate and there's an underrecovery  
5 of fuel cost, how would that underrecovery be recovered?

6 A That's recovered through the annual fuel  
7 adjustment proceedings and adjusted accordingly.

8 Q But where would that -- who -- how would it be  
9 recovered? Through the EMF?

10 A Yeah. Through -- I believe it's -- I don't  
11 have it in front of me handy, but I believe it's Rider 50  
12 through the fuel adjustment and along with the EMF.

13 Q Would that have to be picked up by the other  
14 OPT-V customers?

15 A No. Each segment has a fuel adjust--- each  
16 rate class has their own specific fuel adjustment.

17 Q Mr. Pirro, isn't it true that in your original  
18 calculation of the EDIT Rider you developed class-  
19 specific EDIT credit rates?

20 A That is correct.

21 Q And why did you do that?

22 A That was in line with the cost allocation  
23 method used.

24 Q And by calculating the rider that way, you

1     returned the excess deferred taxes to each class in  
2     proportion to how much each class had paid, didn't you?

3           A     Yes. The revenue requirement for EDIT was  
4     provided to us. Due to billing constraints that we have  
5     and how we have to adhere to how our billing team  
6     administers, we consolidate certain rate schedules into  
7     four different buckets and then they are aggregated up  
8     and then rates were developed.

9           Q     But in your settlement with CIGFUR, the Company  
10    agreed to pay back EDIT to each class at a uniform rate?

11          A     Yes. Yeah. Within the settlement that was  
12    agreed upon by the Company. And going back to our first  
13    EDIT in our original -- well, in our previous rate case,  
14    it falls along the same methodology. It was based on a  
15    uniform method.

16          Q     But under a uniform rate, all customer classes  
17    do not get the same amount of refunds that they -- as  
18    they paid in, do they?

19          A     The revenue requirement would be a uniform and  
20    it would be allocated one factor across all customers.

21          Q     And isn't it true that the OPT-V class would  
22    receive more than it paid in?

23          A     OPT-V would receive more of a credit, that is  
24    correct; however, when we looked at the settlement and

1 the terms, within our original base -- current base rates  
2 and our revenue requirement, residential customers have  
3 been and continue to be subsidized by non-residential  
4 customers. And this was a way to sort of balance that.  
5 You know, rate design is sort of an art, and you try to  
6 be fair, just, and reasonable and find balances, so this  
7 was just a way of trying to balance that.

8 Q So you're combining it in the base rates with  
9 the EDIT? You don't consider them separately?

10 A No. They're definitely separate, but, again,  
11 trying to balance and not have further subsidies just  
12 continue.

13 Q And Mr. Pirro, what's the impact of the  
14 CIGFUR/Harris Teeter/Commercial Group settlements on the  
15 class rate of returns -- rates of return?

16 A In regards to?

17 Q How do they affect the class rates of return on  
18 the OPT-V?

19 A We continue to move all our rate schedules  
20 closer to parity, meaning closer to the retail average  
21 rate of return, so this just continues to move all our  
22 rate schedules closer. I don't believe it favored OPT-V  
23 by any means.

24 Q All right. And you -- the Company does support

1 the rate study that's discussed by Mr. Floyd in his  
2 testimony?

3 A Absolutely. You know, that was one of the  
4 reasons why we have decided to keep things status quo.  
5 Whenever you make changes to rate design, there's  
6 definitely going to be winners and losers just from  
7 making a change through rate design. And, you know,  
8 we're very concerned and cautious about that. Same with  
9 the low-income collaborative and the comprehensive rate  
10 design study. You know, Mr. Floyd and I are constantly  
11 having discussions, and we're both totally in support of  
12 that study.

13 Q All right.

14 MS. EDMONDSON: Thank you.

15 WITNESS PIRRO: Thank you, Ms. Edmondson.

16 CHAIR MITCHELL: Anything further from you, Ms.  
17 Edmondson?

18 MS. EDMONDSON: No, thank you.

19 CHAIR MITCHELL: Okay. All right. Mr. Page?

20 MR. PAGE: Yes, ma'am. Thank you, Madam  
21 Chair.

22 CHAIR MITCHELL: You are up.

23 CROSS EXAMINATION BY MR. PAGE:

24 Q Good morning, members of the Panel. When I

1 first crafted these questions, I believed that I would be  
2 addressing them primarily to Mr. Pirro, but I think  
3 instead I would rather start with Ms. Hager. Good  
4 morning, Ms. Hager.

5 A (Hager) Good morning, Mr. Page.

6 Q Nice to see you again. I want to encourage Mr.  
7 Pirro and Mr. Huber, if they have anything to contribute  
8 to the discussion you and I are about to have, to feel  
9 free to do so. The first set of questions I have for you  
10 are a gift from your friend Mr. Oliver who a few days ago  
11 when I asked him about a cost of service study, he told  
12 me he did not know what a cost of service study was, but  
13 I'll bet you do, don't you?

14 A Yes, sir.

15 Q Could you give us a quick, easy, layman-  
16 oriented explanation for what a cost of service study is  
17 and what it does?

18 A Yes. I'm happy to do that. A cost of service  
19 study takes the revenue requirements that have been  
20 developed by the Company and it spreads them to customers  
21 by customer class. So if you think about it, the revenue  
22 requirement is the size of the pie that the Company is  
23 asking for total -- for the opportunity to recover. And  
24 then cost of service says how do I slice that pie? And

1 the -- this is something, obviously, that's been done  
2 since the very beginning of making rates. You've had to  
3 decide how to, you know, how to allocate those costs.  
4 The -- sort of the seminal work on that was Dr.  
5 Bonbright's study in 1961. It was then sort of  
6 implemented, I would say, in a rigorous way by the NARUC  
7 Cost Allocation Manual in 1992. And in that study it  
8 sort of became the thing that utilities look at to begin  
9 to do cost of service studies.

10 And so what you want to do is you want to say  
11 I've got generation, I've got transmission, I've got  
12 distribution, I've got customer cost in this revenue  
13 requirement, and I want to look to see how each load,  
14 each customer caused those assets, those costs to be  
15 incurred. And so you look at -- you have different  
16 methods for doing each -- each bucket of that. But the  
17 idea is to be -- to do it equitably, to do it in a manner  
18 that doesn't -- isn't biased. It's not intended to  
19 implement policies or implement public policy beyond what  
20 has already been taken into account in the development of  
21 the revenue requirements. And it's sort of -- I look at  
22 it as, you know, how do the electrons flow and what  
23 caused those electrons to flow in that manner.

24 So I'd say that's the basics of cost of



1 service. And one of the things that I find very  
2 interesting is that in every proceeding, folks are --  
3 have a focus on their slice of the pie, and unlike in the  
4 real world everyone wants a smaller slice of the pie in  
5 the cost of service world. No, no, no. Give my slice of  
6 pie to that person. I'll take a smaller slice. And so  
7 that's what -- we have sort of a push and a pull all the  
8 time in dealing with various customer classes, is  
9 everyone has an opinion on how cost of service should be  
10 done on the basis -- and, you know, perfectly  
11 understandable on the basis of how their constituents  
12 would most be benefitted.

13 Q Would I be correct in saying that in doing a  
14 cost of service study, one applies well developed and  
15 understood principles of engineering, accounting, and  
16 perhaps economics?

17 A Absolutely.

18 Q All right. Just to take a couple of simple  
19 examples, in a cost of service study, if one were to --  
20 for Duke, for example -- to allocate the cost of meters  
21 and meter reading, would it come as any surprise to find  
22 that a majority of those costs were allocated to the  
23 Residential class of customers simply because there are  
24 so many more of them than any other class where I said

1 meters and meter reading?

2 A I would agree.

3 Q All right. Now, when the distribution of AMI  
4 meters becomes universal, that cost allocation could  
5 change, could it not?

6 A I'm not saying that it will change, but I think  
7 that it could, potentially.

8 Q Because the total cost of reading meters should  
9 go down once you install the AMI meters?

10 A The cost of meter reading should go down, yes.

11 Q And to take another example, if one were to  
12 allocate the cost of providing a direct transmission  
13 grade interconnection with a customer, wouldn't you  
14 imagine that all of those costs would be allocated to  
15 large users rather than residential customers?

16 A This would be a dedicated substation? Is that  
17 what you're saying?

18 Q Yeah. If a customer has a transmission grade  
19 direct interconnection to the Duke grid, is that going to  
20 be a residential customer ordinarily?

21 A No, sir.

22 Q So, you know, again, the underlying point is  
23 what you're trying to do in the cost of service study is  
24 allocate costs to the customer or class of customers

1 responsible for imposing that cost on the system; is that  
2 correct?

3 A Yes, sir.

4 Q Are you aware of any cost of service  
5 methodology that operates by attempting to allocate  
6 benefits rather than costs?

7 A The only thing that I would say falls into that  
8 category would be we allocate DSM costs -- you could say  
9 it's on the basis of benefits -- but in essence we look  
10 at demand response as a substitute for generation,  
11 therefore, we allocate those costs on the basis of  
12 generation and energy efficiency as a substitute for  
13 energy on the basis of energy. Some -- I don't know if  
14 any utilities do that, but I think there is some concern  
15 that because those are customer type programs, would they  
16 be allocated on the basis of customer. We do not do  
17 that. But as far as I know, Mr. Page, that is the only  
18 area where we would use "benefits," and I'm not aware of  
19 any other utility that allocates cost on the basis of  
20 benefit.

21 Q All right. Let me switch over to Mr. Pirro for  
22 a second because I think this question maybe falls a  
23 little bit more into his bailiwick and would encourage  
24 you, Ms. Hager, and you, Mr. Huber, if you have something

1 to add, please feel free to do so. Good morning, Mr.  
2 Pirro.

3 A (Pirro) Good morning, Mr. Page.

4 Q Mr. Pirro, at some point in time with regard to  
5 the cost of the GIP program, Duke will come back to the  
6 Commission and seek to incorporate those costs into  
7 rates, will they not?

8 A That's correct.

9 Q And is it your understanding that the basis for  
10 allocation of those costs will be the cost causation  
11 principle or will it be some form of comparable benefits  
12 analysis?

13 A It would be -- my understanding, it would be  
14 based on cost causation, and I would ask Ms. Hager to add  
15 anything if she feels the need.

16 A (Hager) I would agree, cost causation.

17 Q So Ms. Hager, since I have you there, let me  
18 just follow up with you. Would you consider it  
19 appropriate or inappropriate to spend a whole lot of time  
20 and effort exploring an alternative cost of service  
21 methodology that's based on allocating benefits?

22 A As I said yesterday, I don't believe it would  
23 be productive. I said it was a waste of time, and I  
24 believe it is.

1           Q     And that's because such a study would depart  
2     from principles of cost causation?

3           A     It would depart from principles of cost  
4     causation. And in addition, it's certainly not done  
5     within the industry in any mainstream way. And it is so  
6     subjective, you know. Benefits are very individualized.  
7     They are impossible -- not impossible -- they're very  
8     difficult to measure. Anything to do with it is  
9     basically an estimate. I think you could spend a  
10    tremendous amount of time and energy, and the result  
11    would be one that would also be discussed at length in  
12    hearings and would -- really, would it produce something  
13    that is beneficial, helpful, makes -- I just do not  
14    believe it is a productive thing to do.

15          Q     In the cost of service study that Duke employed  
16    in this rate case, Ms. Hager, could you tell me the basis  
17    on which generating plant is allocated?

18          A     Yes. Generating plant is allocated on the  
19    basis of Summer Coincident Peak.

20          Q     All right. There are alternative methods for  
21    making that allocation, are there not?

22          A     There are.

23          Q     Why does Duke support the Summer Coincident  
24    Peak methodology for allocating generating plant?

1           A     Duke has historically allocated cost on the  
2     basis of Summer Coincident Peak both in Duke Energy  
3     Progress and Duke Energy Carolinas. And if you look at  
4     the assets that the Company is allocating the cost for,  
5     the vast majority of those were inferred on the basis of  
6     Summer Coincident Peak. The Company has -- there's a  
7     benefit to allocating costs consistently across  
8     jurisdictions, and so the Company has used Summer CP  
9     historically for many years in all of its jurisdictions,  
10    and so it's continuing that, but it recognizes that  
11    things are changing, and that as part of that the Company  
12    has committed to look at a number of different  
13    methodologies in advance of the next rate case.

14                But the Summer CP is a -- it's the -- the  
15    Summer Peak is very important in cost causation, and the  
16    Company continues to support that as the allocation  
17    method for generation.

18           Q     All right. Thank you very much, Ms. Hager.  
19    Let me switch back to Mr. Pirro. Mr. Pirro, would you  
20    agree with me that in the design of rates, it's part  
21    science and it's part art and it's part judgment? Do you  
22    agree with that?

23           A     (Pirro) I do for the most part.

24           Q     So you have this cost of service study in any

1 given case for which you're asked to design rates.

2 That's basically just your starting point, isn't it? I  
3 mean, it doesn't dictate the final design of the rates by  
4 any means, does it?

5 A That's correct. A perfect example would be  
6 from the cost of service we have a unit cost study, and  
7 we just don't use the unit cost study in design rates.

8 Q All right. That's where judgment comes in; is  
9 that correct?

10 A That's correct. That goes back to my  
11 conversation with Ms. Edmondson. We have different types  
12 of customers, different characteristics, different load  
13 factors within certain rate schedules, and we have to  
14 balance that, design rates that are fair and reasonable  
15 across the board.

16 Q The rates that you have proposed in this case  
17 are based, however, upon the Duke cost of service study  
18 that Ms. Hager and I were talking about; is that correct?

19 A That is the -- that is correct. That is the  
20 starting point, yes.

21 Q Would you agree with her testimony regarding  
22 the Summer Coincident Peak method of allocating  
23 generating plant?

24 A I would never disagree with anything that Ms.

1 Hager proposes. She's the expert.

2 Q And I would do so with great trepidation, Mr.  
3 Pirro. The different types of cost of service studies  
4 that Duke has agreed in its second settlement with the  
5 Public Staff to look at, those are not factors in your  
6 rate design in this case; is that correct? You just  
7 agree to look at them for the future.

8 A That is correct. They're not part of this rate  
9 case.

10 MR. PAGE: Thank you, Mr. Pirro, and Panel.  
11 Madam Chair, that's all I have.

12 WITNESS PIRRO: Thank you, Mr. Page.

13 CHAIR MITCHELL: All right. Thank you, Mr.  
14 Page. Mr. Ledford, you are up next. All right. Mr.  
15 Ledford, you're on mute.

16 MR. LEDFORD: Thank you, Madam Chair.

17 CROSS EXAMINATION BY MR. LEDFORD:

18 Q Mr. Huber, I believe that most of these  
19 questions are going to be directed to you, but Ms. Hager  
20 and Mr. Pirro, please feel free to chime in if you have  
21 responses as well. Mr. Huber, are you familiar with the  
22 testimony that was filed by NCSEA witness Barnes  
23 regarding EV rate design?

24 A (Huber) Yes, I am.



1           Q     And beginning on page 7, line 24 of your  
2     rebuttal testimony, you state that "A study of rate  
3     designs that facilitate the adoption of electric vehicles  
4     that provide system benefits for all customers will be a  
5     part of any comprehensive rate design study." Is that  
6     accurate?

7           A     That is accurate.

8           Q     And witness Barnes recommended that the  
9     Commission establish an investigatory docket to receive  
10    information and permit discussion of EV-specific rates.  
11    Do you agree that the Commission should open a docket to  
12    examine EV-specific rates?

13          A     I think it would probably be better to have  
14    this discussion all in one house so that we can see where  
15    EV rates fit in the broader context and make sure that we  
16    have a consistent ideology as it pertains to rates. So,  
17    you know, you don't want to necessarily create some  
18    silos, that you treat one type of technology, you know,  
19    dissimilar than other types. And so in terms of rate  
20    design, I would advocate for folding in EV's -- EV rate  
21    design into the comprehensive rate design review.

22          Q     So do you believe that the Commission should  
23    open a docket to address this comprehensive rate design  
24    study?

1           A     Hmm. You know, I think that a, you know,  
2     third-party facilitated comprehensive rate design review  
3     that has, you know, broad stakeholder engagement, report  
4     outs, and a submittal to the Company is likely  
5     sufficient; however, I'm completely open if the  
6     Commission feels that -- that, you know, a formal docket  
7     is necessary.

8           Q     Thank you. I wanted to address a few of the  
9     specific recommendations that witness Barnes made in his  
10    testimony and get your responses to that. Witness Barnes  
11    breaks down his testimony into characteristics for EV or  
12    -- excuse me -- residential EV specific rates and  
13    nonresidential EV specific rates. So starting with  
14    residential specific rates, do you agree that price --  
15    excuse me -- that the duration of any lowest pricing  
16    period should be at least eight hours to allow customers  
17    time to charge their vehicles?

18          A     And so this is why I feel that these rate  
19    design conversations have to happen in a much bigger  
20    dialogue, because it's very hard for me to say what that  
21    off-peak time period should be without data and the  
22    analytics to make sure that is correct. And so I would  
23    want to make sure, hey, you know, is that length durable?  
24    Like -- so first, is it correct, but how long can it

1 last? And I believe Mr. Barnes says that the rate has to  
2 be locked in for 10 years. And so that -- you know, that  
3 presents a tricky subject where I can't guarantee that a  
4 specific off-peak rate can last, you know, can be eight  
5 hours, and that is in line with system need and where the  
6 data points should be, you know, from now to 10 years  
7 forward. So that's where I would love to have a more  
8 comprehensive conversation with data behind it before,  
9 you know, locking in a certain time period or price  
10 ratio.

11 Q Well, I guess stepping back, do you agree that  
12 submetering is an effective way of metering EV specific  
13 charge -- EV charging?

14 A It's probably the least effective way, but it  
15 is a way to do it.

16 Q Could you please expand upon why you think it's  
17 the least effective way of doing it?

18 A Sure. A few reasons. One, technology is  
19 evolving so that we can actually determine some charging  
20 characteristics through AMI disaggregation or through a  
21 plug-in to a car's OBD II port. So there's more cost  
22 effective ways to gauge when an EV is charging. And I  
23 also think there's probably more transparent and cost  
24 effective ways to reward a customer for charging at times

1     that are more beneficial to the grid and to  
2     nonparticipants.

3             You know, a submeter, in that work it costs  
4     money, it requires an electrician, right, and so any  
5     savings that you would get would be eroded by those  
6     submeter costs. And so, you know, for instance, you  
7     know, when you switch from gasoline to electric, you're  
8     saving maybe 800 to \$1,000 just switching to electricity.  
9     And, you know, trying to go from that switch down to TOU  
10    -- so take our DEC rate, for example. Our DEC rate is  
11    probably around 8.5 cents a kWh for Residential, you  
12    know, with adders, and it's a very low cost rate, one of  
13    the lowest cost rates I've actually have ever been on for  
14    Residential. So that's \$1,000 of savings, give or take.

15            If you move to a submeter TOU rate, maybe you  
16    go from eight and a half to four, eight and a half to  
17    five. That's maybe seven incremental dollars different  
18    per month. And that meter cost will likely be around \$5.  
19    That's where many utilities have it. So, you know,  
20    you're really netting not very much in terms of the  
21    participant savings, and the nonparticipant is -- would  
22    be eroded by the off peak of the TOU rate.

23            Q     Thank you, Mr. Huber. And you mentioned that  
24    the Utility could use AMI disaggregation to determine EV

1 specific load. Would you agree that it would be  
2 appropriate for customers to have access to that data as  
3 well so that they could do their own analytics?

4 A I believe that -- this isn't my subject, but I  
5 believe that's, you know, where Duke is going with the  
6 app and the usage on the app and so forth, but, again,  
7 not my subject.

8 Q Understood. Thank you. And one last question  
9 about EV specific rates. Recognizing that the Company  
10 recommends a big picture comprehensive rate design study,  
11 do you agree that demand charges can be prohibitive to  
12 customers, both residential and nonresidential, in  
13 charging their electric vehicles?

14 A Great question. And with rate design, as  
15 always, it depends, unfortunately. I can't give you the  
16 straight answer because it depends on utilization, you  
17 know, where are the customers, their sophistication.  
18 There could be times where on-peak demand charges  
19 actually greatly help the price for a customer as long as  
20 they stay off that peak time frame, which is, of course,  
21 what we want, because that demand charge is going to  
22 lower the volumetric rate, and so they'll have a better  
23 economics on that off-peak volumetric rate than they  
24 would otherwise. And so unfortunately, it depends on

1 utilization and it depends on the rate structure.

2 Q Thank you, Mr. Huber. Ms. Hager, I do have a  
3 couple of questions for you, so I'm going to transition  
4 at this time. Ms. Hager, you've -- both yesterday and  
5 today you have said that including benefits in cost  
6 allocation is subjective. Is that the case? Does that  
7 reflect your testimony?

8 A (Hager) Yes.

9 Q And we also have heard that ratemaking is an  
10 art, but not a science; is that also correct?

11 A Yes.

12 Q So how do we justify the fact that including  
13 these benefits would be subjective, but ratemaking is not  
14 a science? Isn't an art, in and of itself, subjective as  
15 well?

16 A I think we need to make a distinction here  
17 between cost of service and rate design. Cost of  
18 service, to me, needs to avoid subjective aspects to the  
19 extent it can. And then in rate design, that's where you  
20 have more of the art. I do think that cost of service is  
21 really more of a science.

22 Q Thank you.

23 MR. LEDFORD: Madam Chair, I have no further  
24 questions.

1                   CHAIR MITCHELL: All right. Thank you, Mr.  
2     Ledford. At this point we are with you, Mr. Neal.

3                   MR. NEAL: Good morning. Thank you, Madam  
4     Chair. Thank you, Chair Mitchell.

5     CROSS EXAMINATION BY MR. NEAL:

6           Q     Starting -- this is David Neal representing the  
7     Justice Center, et al. Starting with you, Mr. Pirro, I  
8     just want to ask a quick question first. During --  
9     earlier this morning on cross, I believe you said that  
10    Commercial and Industrial customers are currently  
11    subsidizing the Residential class. Is that what you  
12    said?

13          A     (Pirro) That is correct.

14          Q     And if you would, do you have in front of you  
15    Pirro Second Settlement Exhibit 4?

16          A     I do.

17          Q     And if -- turning your attention to the present  
18    ROR, which is rate of return; is that right?

19          A     That is correct.

20          Q     So turning your attention to the Present Rate  
21    of Return column, do you agree that Pirro Second  
22    Settlement Exhibit 4 reflects a 5.3 percent present rate  
23    of return for the Residential RS?

24          A     Yes. I agree with that.

1           Q     And you would agree that rate OPT is not a  
2     Residential class, correct?

3           A     That is correct.

4           Q     And this chart shows a 4.3 percent rate of  
5     return for the rate OPT; is that right?

6           A     Correct.

7           Q     Thank you. Now, Mr. Pirro, you had some  
8     conversation with Mr. Page about how the cost of service  
9     study is the basis for your proposed rates. Do you  
10    recall that?

11          A     I do.

12          Q     And recognizing that the Company did not  
13    propose an increase in the Residential basic facilities  
14    charge in this case, you nevertheless testified that the  
15    unit cost study from the cost of service study would  
16    justify an increase to the basic facilities charge; is  
17    that right?

18          A     Had we decided to increase the basic facilities  
19    charge, yes, the unit cost study would have shown an  
20    increase is warranted.

21          Q     And so turning your attention -- well, let me  
22    just make sure I've got this right. You are relying on  
23    the use of the Minimum System Method in the Company's  
24    cost of service study to come to that conclusion; is that



1 correct?

2 A That is correct.

3 Q Okay. So turning your attention to Pirro  
4 Exhibit 8 from your direct testimony -- do you have that  
5 in front of you?

6 A I do.

7 Q So where it reads in that gray shaded area in  
8 the top near the middle Theoretical Minimum System BFC,  
9 would you agree that it's the Company's use of the  
10 Minimum System Method that results in what is listed here  
11 as a \$22.56 basic facilities charge for the Residential  
12 RS tariff?

13 A Using the cost allocation method, that is  
14 correct. It would be \$22.56.

15 Q And you would agree that it's -- the use of the  
16 Minimum System Method is the only support that you've  
17 offered for that theoretical basic facilities charge?

18 A That is correct.

19 MR. NEAL: At this time, Chair Mitchell, I  
20 would like to mark an exhibit, Justice Center, et al.  
21 Cross Exhibits 1 and 2, and I will -- I'll just note that  
22 this is the revised Company response to Public Staff Data  
23 Request 100-18 and an embedded spreadsheet from that same  
24 response. So Chair Mitchell, if it would simplify

1 things, I would ask that they be marked together as  
2 Justice Center, et al. Pirro/Hager Cross Exhibit 1.

3 CHAIR MITCHELL: Documents will be so marked.

4 (Whereupon, NC Justice Center, et al.  
5 Pirro/Hager Cross Examination Exhibit  
6 Number 1 was marked for  
7 identification.)

8 Q Mr. Pirro, do you have -- do you have Justice  
9 Center, et al. Pirro/Hager Cross Exhibit 1 in front of  
10 you? I'm sorry. You're on mute, sir.

11 A Thank you. I do not, but you could explain it  
12 to me or walk me through it.

13 Q Are you -- so this is, Mr. Pirro, the Company's  
14 response to -- it's the revised Company response to  
15 Public Staff Data Request 100-18 which, among other  
16 things, was a request from the Public Staff to the  
17 Company to do a calculation of the Basic Customer Method  
18 of apportioning distribution system costs as customer or  
19 demand related. Do you recall this?

20 A Yes, I do.

21 Q And the -- I will represent to you that the  
22 third and final page of Justice Center, et al.  
23 Pirro/Hager Cross Exhibit 1 is the worksheet from DEC  
24 Public Staff DR 100-18 Revised which shows the unit cost

1 study without using Minimum System. Again, do you recall  
2 seeing this before?

3 A Yes. I recall this. Yeah.

4 Q Okay. And you would agree that without using  
5 Minimum System, the unit cost for that same RS,  
6 Residential tariff, that the customer -- the costs that  
7 are allocated as customer related come down to \$11.49?

8 A That is correct. And I would just like to add  
9 that that's because a portion of -- with Minimum System a  
10 portion of distribution lines, poles, transformers are  
11 considered to be customer related. And Ms. Hager, if you  
12 would like to add anything.

13 Q Mr. Pirro, if I may, I have plenty of questions  
14 for Ms. Hager on the Minimum System Method coming up.

15 A Okay.

16 Q It's like I'm almost finished with questions  
17 for you. But you would agree that this amount, this  
18 \$11.49 per customer per month, is about \$2.50 less than  
19 the current Residential basic facilities charge of \$14.00  
20 a month.

21 A The difference between the two methods, that is  
22 correct.

23 Q And just to be clear, you did not conduct the  
24 Company's cost of service study; is that right?

1           A       That is correct.

2           Q       So I think that's all the questions I have for  
3 you, Mr. Pirro. Turning to Ms. Hager, good morning.

4           A       (Hager) Good morning, Mr. Neal.

5           Q       So you would agree that the starting place for  
6 the Company's cost of service study is the actual costs  
7 incurred by the Utility in providing service to its  
8 customers?

9           A       In the test period, yes, that's correct.

10          Q       And you would agree that in the Company's cost  
11 of service study, the costs should be classified  
12 according to their cost causation characteristics?

13          A       Yes.

14          Q       Now, as I alluded to a moment ago, I am going  
15 to ask you some questions about the Company's use of the  
16 Minimum System Method in its cost of service study.  
17 Would you agree that the Company first identifies its  
18 actual distribution grid costs in its North Carolina  
19 service territory?

20          A       Yes.

21          Q       I think you previously referred to that in  
22 testimony to this Commission as the standard  
23 configuration; is that right?

24          A       I don't recall using those words, and I'm not

1     sure what you mean in this context.

2           Q     Well, there was -- in your testimony to the  
3     Commission in the last rate case about how the Minimum  
4     System Method works, I just -- I recall you using the  
5     term "standard configuration" to refer to the actual cost  
6     of the distribution grid, the poles, conduit,  
7     transformers.

8           A     I understand what you're saying, so it's the --  
9     it's the as-built configuration.

10          Q     Thank you. So then the Minimum System Method  
11     is used to calculate a hypothetical minimum distribution  
12     grid, so -- and that's an estimate of what the cost would  
13     have been if the Utility had installed distribution grid  
14     units, again, transformers or poles, lines, that were  
15     each the minimum size unit of the type of equipment that  
16     would be used on the system; is that right?

17          A     I think that's an excellent summary of it.

18          Q     I'm not quite sure I heard your answer. Sorry,  
19     Ms. Hager.

20          A     I said that -- I said that is an excellent  
21     summary of what Minimum System is.

22          Q     Thank you. So just to be -- to put a finer  
23     point on it, so as an example you would take the grid as  
24     it is and then substitute the smallest size transformers

1     that are currently in use, right?

2           A     Yes.

3           Q     And is it fair to say that the reason for  
4     estimating the cost of this hypothetical minimum  
5     distribution system from the Company's point of view is  
6     then to allocate those costs as customer related?

7           A     I'd say that the purpose is to reflect the  
8     costs that each customer caused.

9           Q     And, again, your -- it's your belief that the  
10    customers caused this minimum distribution grid and --  
11    but the point of doing the calculation is to then  
12    allocate those as customer related; isn't that right?

13          A     Yes.

14          Q     And then I guess the final step would be to  
15    subtract those minimum system costs from the standard  
16    configuration or the total actual cost of the grid, and  
17    those remaining costs are then considered demand related,  
18    correct?

19          A     Again, a very good summary of that.

20          Q     Okay. So -- but you would agree that Duke does  
21    not build a minimum distribution grid to connect each  
22    customer to the grid, right?

23          A     That's correct.

24          Q     And in that sense the Company did not incur the

1 cost of actually building a minimum size distribution  
2 grid?

3 A I wouldn't agree with that. The Company  
4 incurred a cost to build the as-built system, a portion  
5 of which was caused by the fact that the customer was  
6 being connected to the system.

7 Q But, again, from just a literal definition of  
8 terms, the Company did not incur cost to build a minimum  
9 distribution grid?

10 A I don't agree. The Company incurred that, plus  
11 additional cost to supply their demand.

12 Q But you would agree that -- we just went over  
13 with Mr. Pirro using a different methodology the Basic  
14 Customer Method which I know you do not agree with a  
15 Basic Customer Method, it reflects customer allocated  
16 costs in a very different way than the minimum system  
17 does, correct?

18 A I agree.

19 Q Now, put -- to maybe put this a different way,  
20 the Company's actual distribution grid is designed to  
21 serve expected and actual customer peak demand, correct?

22 A It's designed to serve actual and peak demand,  
23 as well as energy needs, as well as provide  
24 interconnection to the customer should they desire to use

1 the system, all of those.

2 Q I guess put another way, when Duke engineers  
3 are building a grid, they're building it to serve actual  
4 and expected load, correct --

5 A I --

6 Q -- in terms of how they size equipment, for  
7 example?

8 A I agree.

9 Q And would you agree that a characteristic of  
10 the distribution grid is that it is shared between  
11 customers?

12 A Yes.

13 Q And so you can -- for example, there are times  
14 when a new home could be added to an existing  
15 distribution grid without requiring any new poles, any  
16 new conductors, or even any new transformers, correct?

17 A That is correct.

18 Q And by the same token, there might be times  
19 where a residence in the middle of a neighborhood is torn  
20 down, taken out of service, and that would not require  
21 the removal of any poles, conductors, or transformers  
22 from the grid; isn't that right?

23 A I am not sure, but I think that sounds correct.

24 Q So next I'm just going to ask you to consider



1 kind of a hypothetical subdivision, so a new subdivision,  
2 so new service. And to keep things relatively simple,  
3 this is a new residential development that's not served  
4 by any gas utility, and it has a mixture of residential  
5 properties. Some are 3,000 square foot detached homes on  
6 large lots, some are 1,000 square foot connected  
7 townhomes, and an apartment building with small 500  
8 square foot apartments. Are you with me so far?

9 A I am.

10 Q So you would agree that in order to serve the  
11 expected load of ten 3,000 square foot detached homes on  
12 large lots, the Company would need more poles,  
13 conductors, and really larger transformers per residence  
14 than would be required for a group of ten 1,000 square  
15 foot townhouses that were all connected?

16 A I believe that's correct.

17 Q And by the same token, you would expect fewer  
18 poles and conductors and smaller transformers needed to  
19 serve ten 500 square foot apartments per unit that was  
20 all in one building than would be required for those ten  
21 detached 3,000 square foot homes?

22 A Well, you're really getting beyond my  
23 expertise. I don't install distribution, but -- but I  
24 understand your examples, so if we can just move forward

1 with it without my agreeing that -- that those dynamics  
2 work.

3 Q So, but under -- so you would agree, though,  
4 that under a Minimum System Method approach, a  
5 significant portion of that distribution grid, of those  
6 poles, lines, and transformers, are going to be split  
7 evenly per residential account as -- and considered  
8 customer related. Isn't that the result of using Minimum  
9 System?

10 A That is correct, and that is simply the nature  
11 of utility rates in terms of you bucket customers that  
12 are similarly situated. For example, on our system it's  
13 those that are served -- you know, have natural gas or  
14 have electric and those that don't have electric, and you  
15 bucket them together, and at any point one customer is  
16 probably paying more than their actual cost to be served  
17 and their next door neighbor is paying less than their  
18 actual cost to be served. So I think what you've said is  
19 true, but I don't think that's -- that means that the  
20 methodology used to develop that uniform rate is  
21 incorrect or unfair.

22 Q So to support the use of Minimum System, you've  
23 cited the NARUC 1992 Cost Allocation Manual; is that  
24 right?

1           A       That is correct.

2           Q       And have you -- you did not identify any  
3 additional support for use of Minimum System in your  
4 testimony; is that right?

5           A       I referenced the Orders that this Commission  
6 has issued supporting Minimum System in the past, but I  
7 believe that's probably the extent.

8           Q       And you would agree that in -- well, let me  
9 just switch gears a little bit. When you're sort of  
10 putting forward the Company's hypothetical minimum  
11 system, what do you consider to be a minimal load?

12          A       We use -- we say something like a single light  
13 bulb. If every customer had a single light bulb behind  
14 the meter, what would that system need to look like? How  
15 would it have been built if that was what we had?

16          Q       And you would agree that in 1992, when the  
17 NARUC Cost Allocation Manual was issued, that  
18 incandescent light bulbs were standard issue?

19          A       Absolutely.

20          Q       And you would agree that the light provided by  
21 a 100 watt bulb in 1992 could be replaced today with  
22 maybe a 10 watt LED bulb?

23          A       That's correct, but it would not affect the  
24 build of the minimum system.

1 Q So that's exactly what I was going to ask.

2 With that in mind, have you ever considered what an even  
3 more minimal system to serve even more minimal usage  
4 might look like, some 10 percent less today than it might  
5 have been in 1992?

6 A No.

7 Q And so you have not attempted to measure the  
8 actual load that the Company's hypothetical minimum  
9 system would provide to each residential customer?

10 A No.

11 Q But you would agree that this hypothetical  
12 minimum system would meet more customers -- a larger  
13 percentage of their customers' demand than a single light  
14 bulb?

15 A Could you repeat that, please?

16 Q Yeah. I should. My apologies. Would you  
17 agree that the hypothetical minimum system would meet a  
18 significant -- a significant portion of the average  
19 residential customer's demand requirements?

20 A I just don't think I'm in a position to answer  
21 that. I don't know how much load that minimum  
22 transformer size could serve.

23 Q All right. Now, we're sort of on this theme of  
24 the Company's reasons for using Minimum System. Would

1     you agree that a minimum size grid would not require the  
2     investments contemplated by the Company' Grid Improvement  
3     Plan?

4           A     No. I wouldn't agree with that. I think  
5     essentially as those programs are implemented, they are  
6     essentially part of Minimum System.

7           Q     So you think that the amount of grid  
8     distribution assets that are required to connect a  
9     customer to power a light bulb, that you would need a  
10    self-optimized grid in order to achieve that minimum size  
11    grid?

12          A     I think the self-optimized grid would become  
13    standard -- the standard operation, and in the  
14    theoretical minimum system ideal there would be some  
15    minimum system self-optimizing grid that would be  
16    installed as well.

17          Q     So in this way, minimum system is kind of a  
18    one-way ratchet up as the Company invests in more  
19    sophisticated distribution grid assets, what's considered  
20    a minimum grid -- a minimum distribution grid continues  
21    to increase in size and cost?

22          A     Not necessarily. I do think that all of our  
23    asset costs tend to increase over time, and minimum  
24    system would tend to increase with that.

1           Q     But again, just so I'm clear, the theoretical  
2     justification for minimum system is what's the smallest  
3     distribution grid needed to connect each customer to  
4     power a light bulb? Integrated Volt/VAR Control is not  
5     required to connect each customer to be able to power a  
6     light bulb, correct?

7           A     And I'm not clear if there are -- if there are  
8     any distribution assets involved in IVVC. That's the --  
9     that's the assets that will be allocated using minimum  
10    system, is only distribution assets.

11          Q     Fair enough. But returning back to  
12    distribution assets like self-optimized grid, you would  
13    agree that it's not really a minimal grid if it's self-  
14    optimized?

15          A     We look -- for example -- here's an example.  
16    You could make an argument that a minimum grid is always  
17    overhead. Well, in this case in DEC, because our  
18    standard system now is overhead or underground, whichever  
19    one is most economical, we are allocating both overhead  
20    and underground conductor costs. And I would really see.  
21    If you think about the kind of assets that are going to  
22    be allocated under the GIP program, they are -- to the  
23    extent that they are in accounts that are part of what is  
24    allocated on minimum system, they become part of minimum

1 system.

2 Q All right. I think we've covered that  
3 sufficiently, but I have a sort of related question that  
4 the Integrated Volt/VAR actually reminded me of, which  
5 is, you know, we've talked about this theoretical  
6 construct of what's the minimal grid needed to get power  
7 to customers to light a light bulb. Ms. Hager, does the  
8 Company use a minimum transmission system analysis in its  
9 cost of service study that would consist of the size of  
10 transmission assets that would be required to support  
11 that minimum load and allocate that hypothetical minimum  
12 transmission system as customer related?

13 A We don't, but I do believe there is a portion  
14 -- a minimum portion of the transmission system that is  
15 necessary. That was not included in the NARUC manual.  
16 It's just something the Company has not done. But I do  
17 think -- I do think it's there.

18 Q Now, turning -- I'd like to turn your attention  
19 now to Public Staff Hager/Pirro Cross Exhibit 1, the  
20 Electric Cost Allocation for a New Era from the  
21 Regulatory Assistance Project. Do you still have that in  
22 front of you?

23 A If you'll give me just a second, I will. So  
24 can you identify again what that is?

1           Q     It was yesterday marked as Public Staff  
2     Hager/Pirro Cross Exhibit 1, the Regulatory Assistance  
3     Project's Electric Cost allocation for a New Era manual.

4           A     I do have that.

5           Q     And I think, if I heard you correctly yesterday  
6     in response to questions from Public Staff, that the  
7     Regulatory Assistance Project, in your view, comes from a  
8     specific viewpoint of favoring energy efficiency and  
9     distributed energy resources; is that right?

10          A     That's correct.

11          Q     And you would agree that Duke Energy has  
12     adopted corporate-wide carbon reduction goals, pledging  
13     to reduce its carbon pollution by at least 50 percent by  
14     2030 and achieve net-zero emissions by 2050?

15          A     That's correct.

16          Q     And you would agree that energy efficiency and  
17     clean, renewable energy resources are going to be an  
18     important component of achieving those goals, right?

19          A     I would agree.

20          Q     And it's also true that within the State's  
21     declared public policy for Public Utilities regulation in  
22     General Statute 62-2(a), that the public policy of the  
23     State includes support for energy efficiency,  
24     conservation, and other demand-side options; isn't that



1 right?

2 A That is correct. And I believe as those  
3 policies are enacted, including the Company's goals  
4 related to climate change, and those are accepted, we  
5 build those assets to serve to meet those public policy  
6 objectives and they become part of revenue requirement,  
7 then that's where they're captured, and then -- but cost  
8 allocation, my concern with the Regulatory Assistance  
9 Project Cost Allocation Manual is it chooses methods and  
10 policies that would -- as it says, its goal is to  
11 accelerate the adoption --

12 Q Uh-huh.

13 A -- of a -- let me see -- it's a reliable -- a  
14 clean, reliable, and efficient energy future I think  
15 that's a laudable goal, but I don't think it should be  
16 captured here in rate design. It should be captured in  
17 revenue requirements. Excuse me. It shouldn't be  
18 captured in cost of service. It should be captured in  
19 revenue requirements. And then keep the cost of service  
20 focused on cost causation and how the electrons flow.

21 Q And, again, as you know, there's a debate about  
22 what is the proper method to properly identify what has  
23 caused those distribution grid costs. And turning your  
24 attention to page 14 of that RAP Cost Allocation Manual,

1     which I believe is page 985 of the Public Staff exhibits  
2     -- again, we're on Public Staff's --

3             A     I have that.

4             Q     -- Pirro/Hager Cross Exhibit 1.  If you look at  
5     the third paragraph on that page, do you see where it  
6     says "Cost allocation has been addressed in several  
7     important books and manuals on utility regulation over  
8     the past 60 years, but much has changed since the last  
9     comprehensive publication on the topic, the 1992 Electric  
10    Utility Cost Allocation Manual from NARUC.  Although  
11    these works and historic best practices are foundational,  
12    the legacy methods of cost allocation from the 20th  
13    century are no more suited to the new realities of the  
14    21st century than the engineering of internal combustion  
15    engines is to the design of new electric motors."  Did  
16    you see where it says that?

17            A     I see that.

18            Q     And, again, not asking whether you agree with  
19    the statement, you would agree that the electric energy  
20    sector has undergone significant changes since 1992?

21            A     I agree.

22            Q     Now, if you could turn to page 145 of that RAP  
23    Cost Allocation Manual.  Again, we're on Public Staff  
24    Hager/Pirro Cross Exhibit 1.

1           A     Okay.

2           Q     Turning your attention to the last full  
3 sentence on the last page, do you see where it says "The  
4 Basic Customer Method for classification is by far the  
5 most equitable solution for the vast majority of  
6 utilities"?

7           A     I see that.

8           Q     And you would agree that the Basic Customer  
9 Method, that under the Basic Customer Method that only  
10 the cost of meters, service drops, and customer service  
11 are classified as customer related, and all other  
12 distribution costs are classified as demand related?

13          A     That's correct.

14          Q     All right. I'm almost done. I'm just going to  
15 ask you to turn to the next page, page 146 of that RAP  
16 Cost Allocation Manual.

17          A     Okay.

18          Q     And do you see where it says in the middle of  
19 that first column "However, more general attempts by  
20 utilities to include a far greater portion of shared  
21 distribution system cost as customer related are  
22 frequently unfair and wholly unjustified. These methods  
23 include straight fixed variable approaches" -- which --  
24 I'm sorry -- "where all distribution costs are treated as

1 customer related," and just skipping past the  
2 parentheses, "and the more nuanced minimum system and  
3 zero intercept approaches included in the 1992 NARUC Cost  
4 Allocation Manual." And then just skipping down a few,  
5 do you see where it says "This minimum system analysis  
6 does not provide a reliable basis for classifying  
7 distribution investment and vastly overstates the portion  
8 of distribution that is customer related"? Have you seen  
9 that part of the manual?

10 A I do see that, and this is one of the reasons  
11 that I struggle with this manual. I have looked at it.  
12 I think it has -- it has a lot of good information, but I  
13 do think that the viewpoint of the authors is shared as  
14 fact as opposed to their opinion.

15 Q Well, and, again, I take it as a given that you  
16 don't agree with that last statement, but my question is  
17 have you read the pages that follow in which the authors  
18 of the RAP Cost Allocation Manual provide eight reasons  
19 for why the Minimum System Method is unreliable?

20 A I have not read it recently, but I have read  
21 it.

22 Q And you would agree that in your -- neither in  
23 your direct or your rebuttal testimony you have not  
24 attempted to address each of those eight points

1 criticizing minimum system?

2 A I would have to sit here and look at the -- at  
3 the eight points, and I'm not sure any of us want to do  
4 that.

5 Q I think the record will speak for itself.

6 Thank you.

7 MR. NEAL: I have no further questions, Chair  
8 Mitchell.

9 CHAIR MITCHELL: All right. Thank you, Mr.  
10 Neal. Redirect for the Panel, Ms. Jagannathan?

11 MR. JENKINS: Madam Chair, I have a few  
12 questions if I may. Alan Jenkins.

13 CHAIR MITCHELL: All right. Mr. Jenkins, you  
14 may proceed.

15 MR. JENKINS: Thank you.

16 CROSS EXAMINATION BY MR. JENKINS:

17 Q Ms. Hager, good morning. Good to see you  
18 again.

19 A Good to see you.

20 Q You've been talking about the subjectivity of  
21 allocating cost based on perceived benefits instead of  
22 cost causation. Let's briefly explore one example. Did  
23 you hear Mr. Oliver testify that a customer requiring a  
24 24-hour medical home ventilator device might consider the

1 value of outage avoidance to be priceless?

2 A Yes, I did.

3 Q Now, I understand that the Company's GIP cost-  
4 benefit analysis, a rough estimate of only five or 10  
5 bucks was assigned to the value of each outage avoidance  
6 per residential customer. You'd agree that priceless is  
7 a much higher value than \$5, right?

8 A Yes.

9 Q By simple mathematics, wouldn't adding a  
10 priceless value to the residential side of the equation  
11 necessarily dramatically shift perceived GIP benefit  
12 percentages between classes?

13 A It certainly would. And I think this is the  
14 challenge with trying to allocate cost on the basis of  
15 benefits. Everyone is different, and even from day to  
16 day everyone is different. It's a -- I can't envision a  
17 productive way to do that.

18 Q Let's assume a scenario where DEC would  
19 aggregate into a new medical device class all Residential  
20 customers employing 24-hour home medical devices. If you  
21 had to allocate GIP investment cost based on perceived  
22 benefits, couldn't this result in members of this medical  
23 device class paying significantly higher rates than  
24 similar customers who don't have such medical needs?

1           A     Theoretically, yes.

2           Q     I think you'd agree that not only would this be  
3     controversial and very subjective; it would also be very  
4     unfair, wouldn't it?

5           A     It would be certainly very unfortunate if that  
6     was how those costs were allocated.

7           Q     Okay. Thank you.

8           MR. JENKINS: Nothing further.

9           CHAIR MITCHELL: All right. Redirect?

10          MS. JAGANNATHAN: Thanks, Chair Mitchell.

11     REDIRECT EXAMINATION BY MS. JAGANNATHAN:

12          Q     Mr. Huber, I think I'll start with you. I just  
13     have a few questions on your discussion with Mr. Barnes.  
14     Is it safe to say that -- I'm sorry -- Mr. Ledford --  
15     given that discussion, is it safe to say that electric  
16     vehicles will be a lively discussion if it is included in  
17     an approved comprehensive rate design study?

18          A     (Huber) Oh, most definitely.

19          Q     And I think Mr. Pirro touched on this a bit,  
20     but if the Commission is to order a comprehensive rate  
21     design study, does the Company view this as kind of a  
22     blank slate to take a fresh look at all the rate designs?

23          A     Yes, 100 percent. You know, this is how I view  
24     it, a data-driven collaborative process where everything

1 is on the table, right? And when I say that, I don't  
2 want it to seem like this is going to get crushed by its  
3 own weight by any means. I think, you know, we would  
4 start out by obtaining goals from the different  
5 stakeholders, prioritization, mapping, and then diving  
6 into low-hanging fruit issues that we can, you know, work  
7 on right away. And that might be electric vehicles. It  
8 could be some other things.

9 And so I think I just want to strongly  
10 communicate that, that really everything is on the table,  
11 and if we find things that are low-hanging fruit that we  
12 have relative consensus around, we might -- you know, we  
13 might say, hey, let's file something right now; let's not  
14 wait till maybe even the conclusion. And you've seen  
15 that in a recent effort that I've led around a Winter  
16 Peak reduction study, where we've really leave no stone  
17 unturned and look at all the different ways that we could  
18 reduce Winter Peak through clean resources.

19 Well, one of the first, you know, things to pop  
20 out of that -- and, again, we didn't -- you know, this  
21 was just, you know, open it up, let's see what we find.  
22 One of the first things that popped up in that was, hey,  
23 we need to have a bring your own thermostat program for  
24 winter focused, you know, demand response. And so we



1 actually filed that recently with this Commission, and  
2 we're not even done with that study yet and we're still  
3 working with stakeholders on it.

4 So, you know, that's just an example of it's a  
5 blank slate and we'll be, you know, hitting issues with a  
6 cadence that's appropriate with the data and the  
7 stakeholders.

8 Q Thanks, Mr. Huber. And I just have one last  
9 kind of clean-up question. Mr. Ledford was asking you  
10 some questions about access to AMI data, and I believe  
11 you said you weren't the appropriate witness for that.  
12 Is it your understanding that Mr. Schneider would be more  
13 suited to answer questions about access to AMI data?

14 A That's my understanding.

15 Q It's also my understanding that he  
16 unfortunately did not get excused this morning, so he'll  
17 have a chance to talk about it.

18 Okay. Thanks, Mr. Huber. Turning to Mr.  
19 Pirro, Mr. Pirro, in your discussion with Mr. Neal you  
20 mentioned that the Company elected not to seek an  
21 increase in the Residential basic facilities charge in  
22 this case; isn't that right?

23 A (Pirro) That is correct.

24 Q And I think you also mentioned that if you had

1     -- if you had strictly followed the unit cost study using  
2     the Minimum System Method, that would have justified an  
3     increase in the basic facilities charge for Residential  
4     customers, right?

5           A     That is correct.

6           Q     Okay. And can you tell me why the Company  
7     decided to leave the basic facilities charge at its  
8     current rate?

9           A     Yes. As mentioned yesterday during Mr. De  
10    May's testimony, the Company is in full support of a low-  
11    income collaborative to address those concerns. This was  
12    a very contentious issue in the previous case, and the  
13    Company elected just to go down the path of a low-income  
14    collaborative.

15          Q     Okay. So would it be fair to say that even if  
16    the Company were to propose the Minimum System Method in  
17    a future rate case, they wouldn't be handcuffed from  
18    considering low income or alternatives to help low-income  
19    customers in the low-income collaborative?

20          A     Yes. That is correct.

21          Q     Okay. And I just wanted to ask you a quick  
22    clarifying question. You spoke about how in the  
23    Company's last rate case in an EDIT rider the charges  
24    were spread to customer classes on a uniform sense per

1 kWh basis. Do you remember that discussion?

2 A I do.

3 Q And just as a point of clarification, that was  
4 a North Carolina EDIT rider that was approved by the  
5 Commission in the E-7, Sub 1146 case, right?

6 A Yes. That is correct.

7 Q Okay. Thanks. All right. My next questions  
8 are for Ms. Hager. Ms. Hager, do you recall discussing  
9 with Mr. Page EE, or energy efficiency, and DSM programs?

10 A (Hager) I do.

11 Q And is it fair to say the implementation and  
12 cost recovery for DSM and energy efficiency programs are  
13 governed by statute in North Carolina?

14 A That is my understanding.

15 Q And subject to check, would you agree that the  
16 statute governing cost recovery for energy efficiency and  
17 demand-side management programs provides that utilities  
18 are to assign cost to the class of customers that  
19 directly benefit from those programs?

20 A That's my understanding.

21 Q All right. And it gets a little chopped up  
22 when on cross, I know, but I was wondering if you'd just  
23 give us a basic explanation of what the Minimum System  
24 Method is and why the Company has proposed it for

1 classifying distribution cost in this case?

2           A       Okay. The thought behind minimum system is  
3 that beyond the meter and the meter reading and the  
4 customer service and billing, those sorts of things,  
5 beyond those basic costs to connect the customer, that  
6 there are also some minimum costs that the Company incurs  
7 just to ensure that if a customer wants to flip a light  
8 -- flip on a light switch, that that power is there, you  
9 know, conductors, transformers, poles, et cetera. And it  
10 is -- the Company has used it for as long as anyone can  
11 remember. It is the method that is -- the NARUC manual  
12 is -- let me restate that. The NARUC manual states that  
13 a portion of distribution costs are -- that these costs  
14 are customer related, and it proposes methods that  
15 include minimum system.

16                   And to me, the concept is it's -- it doesn't  
17 change as the -- as the system has evolved over time.  
18 And as we prepare for the new way that our system will be  
19 used to be, you know, dual flow sort of systems going  
20 back and forth, the concept is still solid, that there is  
21 some minimum system. And the method that the Company  
22 uses, I believe, is reasonable to develop an estimate of  
23 that. It's not -- it's -- you know, it's not something  
24 you can go out and touch that minimum system, but it is

1 still a portion of that total distribution system.

2 And I understand why Intervenors, certain  
3 Intervenors would prefer not to have that in place, but  
4 it doesn't change my view that it is simply a fact that a  
5 portion of that distribution system is there to ensure  
6 that any customer who desires service can receive it.

7 Q Thank you. And I believe Mr. Neal alluded to  
8 this before. You were the Company's cost of service  
9 witness in Duke Energy Carolinas last rate case in E-7,  
10 Sub 1146; isn't that right?

11 A That's correct.

12 Q And is it fair to say that minimum system was a  
13 hotly contested issue in that case as well?

14 A It was.

15 Q And if I can have you -- do you have a copy of  
16 the Commission's Order Accepting Stipulation, Deciding  
17 Contested Issues, and Requiring Revenue Reduction issued  
18 on June 22nd, 2018, in Docket Number E-7, Sub 1146?

19 A I do.

20 MS. JAGANNATHAN: And Chair Mitchell, I believe  
21 Ms. Force confirmed that the Commission has taken  
22 Judicial Notice of this document, but if it would be  
23 easier for me to identify it as an exhibit, I'm happy to  
24 do so.

1 CHAIR MITCHELL: The Commission has taken  
2 Judicial Notice of the Order.

3 MS. JAGANNATHAN: Okay. Thank you.

4 Q All right. Ms. Hager, if you could just turn  
5 to page 87 of that Order.

6 A Okay. I'm there.

7 Q Okay. And if you -- if you take a look at the  
8 last full paragraph on that page, just above the heading  
9 that says Evidence and Conclusions for Finding of Fact  
10 Number 29, the Commission, indeed, approved Duke Energy  
11 Carolinas' use of the Minimum System Methodology for cost  
12 allocation in that proceeding; isn't that right?

13 A That's correct.

14 Q And in so doing they note, and I quote, that  
15 "They placed significant weight on the testimony of  
16 Company witness Hager regarding the Company's long  
17 history of employing the Minimum System Method and this  
18 method's alignment with cost causation principles." Is  
19 that correct?

20 A That's correct.

21 Q Okay. And if you can go up just one paragraph  
22 from that, it's the middle paragraph on that page. I'm  
23 not going to read through that entire paragraph, but is  
24 it your understanding that as a result of minimum system

1     being a litigated issue in that case, and in particular  
2     in light of the Company's anticipated investments in grid  
3     modernization programs, the Commission said that --  
4     stated that "...distribution cost allocation among  
5     customer classes will take on heightened importance in  
6     future rate cases"?

7             A     That's what it says.

8             Q     And as a result, the Commission directed the  
9     Public Staff to facilitate discussions with electric  
10    utilities to evaluate and document the basis for  
11    continued use of minimum system and to identify any  
12    specific changes and recommendations as appropriate?

13            A     That's correct.

14            Q     And I believe the Commission also directed the  
15    Public Staff if they had any alternative methods to  
16    suggest, that they should include that in their report;  
17    is that right?

18            A     That's correct.

19            Q     And do you know, did the Public Staff submit  
20    the report that the Commission asked it to?

21            A     It did.

22            Q     And are you familiar with that report?

23            A     I am.

24                   MS. JAGANNATHAN: All right. Chair Mitchell,

1 I'm going to ask that DEC Exhibit 32, which is the report  
2 of the Public Staff on the minimum -- excuse me --  
3 Minimum System Methodology of North Carolina Electric  
4 Public Utilities, Docket Number E-100, Sub 162, issued on  
5 March 28th, 2019, be identified as Hager DEC Redirect  
6 Exhibit 1.

7 CHAIR MITCHELL: The document will be so  
8 marked.

9 MS. JAGANNATHAN: Thank you, Chair Mitchell.

10 (Whereupon, Hager DEC Redirect  
11 Examination Exhibit Number 1 was  
12 marked for identification.)

13 Q And Ms. Hager, what do you understand the  
14 Public Staff's conclusion to be from this report?

15 A The Public Staff concluded that continued use  
16 of minimum system was justified for the electric  
17 utilities for the purposes of cost allocation, but then  
18 recommended that it did not necessarily carry over. It  
19 was sort of the beginning point for rate design.

20 Q Okay. And did the Public Staff in that report  
21 recommend any alternative methodologies that were a  
22 better way of allocating distribution?

23 A They did not.

24 Q Okay. If you'll turn to page 4 of that report.



1           A     Yes, ma'am.

2           Q     And at the top of page 4, the Public Staff  
3     lists out kind of the information they considered in  
4     forming their opinion in this report, and I just notice  
5     they list Mr. Neal as one of their sources. In the first  
6     full paragraph, the Public Staff notes that it reviewed  
7     the National Association of Regulatory Utility  
8     Commissioners Electric Utility Cost Allocation Manual.  
9     Is that what you've been referring to as the NARUC  
10    manual, the NARUC CAM?

11          A     Yes.

12          Q     Okay. And this was the version published in  
13    January 1992, and the Public Staff said that they  
14    reviewed it "...for guidance on the allocation of  
15    electric utilities costs. The NARUC manual continues to  
16    be considered an important resource for the calculation  
17    and allocation of electric utility cost of service for  
18    regulatory commissions, consumer advocates, and parties  
19    before the Commission testifying on issues of cost of  
20    service and rate design." Is that what the Public Staff  
21    said?

22          A     Yes, it is.

23          Q     And do you agree with that statement?

24          A     I do.

1                   CHAIR MITCHELL: Ms. Hager, just for purposes  
2 of clarity of the record, would you repeat your response?  
3 You trailed off there at the end.

4           A       My apologies. I said I do.

5           Q       All right. Ms. Hager, if I could just turn  
6 your attention to the agreement that the Company reached  
7 with CIGFUR III. I believe that was identified as Public  
8 Staff Pirro/Hager Cross Exhibit 2.

9           A       I have that.

10          Q       Great. And I believe yesterday with Ms. Downey  
11 you were discussing page 4, Section III.B of that  
12 Settlement Agreement; isn't that right?

13          A       That's correct.

14          Q       Okay. And just so that we're crystal clear,  
15 this provision, as you understand it, refers to deferred  
16 GIP costs, i.e., not the costs that are actually being  
17 sought for recovery in this proceeding, but what will be  
18 sought for recovery when those deferred costs are brought  
19 into rates if they are approved by the Commission?

20          A       That's correct.

21          Q       And then on that same page, if you can skip  
22 down to Section V.A, I believe Ms. Downey asked you about  
23 this section as well. And in that provision the Company  
24 agrees prior to its next rate case to discuss with CIGFUR

1     III potential cost of service methodologies; isn't that  
2     right?

3           A     That's correct.

4           Q     Okay. And in that paragraph the Company also  
5     agrees to file in its next rate case a cost of service  
6     study based on Summer/Winter Coincident Peak; is that  
7     right?

8           A     Correct.

9           Q     And wouldn't you agree that the Company in past  
10    rate cases and, in fact, in this case files multiple cost  
11    of service studies, but obviously only recommends one  
12    approach?

13          A     That's correct.

14          Q     So as you understand it, this paragraph just  
15    requires the Company to file the cost of service study,  
16    not necessarily to recommend it?

17          A     That's certainly my understanding of the  
18    settlement.

19          Q     And then, in fact, the Company has also agreed  
20    to perform cost of service studies under no less than six  
21    methodologies in its Second Agreement with the Public  
22    Staff; is that right?

23          A     That's correct, too.

24          Q     All right. Turning to next page of the CIGFUR

1 Settlement Agreement, page 5, and it's Section V.B, do  
2 you recall Ms. Downey asking you yesterday about the  
3 Company's agreement to adjust its peak demand to remove  
4 curtailable/non-firm load in its next general rate case?

5 A I do.

6 Q And, again, the Company is not proposing the  
7 Commission approve that approach in this rate case, are  
8 they?

9 A No.

10 Q And to your knowledge, has the Public Staff  
11 filed testimony with this Commission supporting the use  
12 of a similar adjustment for Dominion North Carolina?

13 A Yes. That is correct.

14 MS. JAGANNATHAN: And Chair Mitchell, I would  
15 just ask the Commission to take Judicial Notice of Public  
16 Staff witness Jack Floyd's testimony filed on September  
17 24th, 2012, in Docket Number E-22, Sub 479.

18 CHAIR MITCHELL: Ms. Jagannathan, did you  
19 specify his direct testimony?

20 MS. JAGANNATHAN: Yes. I believe that's  
21 correct.

22 CHAIR MITCHELL: He may have only filed --  
23 okay. All right. Hearing no objection, the Commission  
24 will take Judicial Notice of Mr. Floyd's testimony filed

1 in Docket E-22, Sub 479.

2 MS. JAGANNATHAN: Thank you. And Chair  
3 Mitchell, could I just take a short break just to go  
4 through my notes? I don't think I have many more  
5 questions, but I just want to take one quick break.

6 CHAIR MITCHELL: Actually, we will take our  
7 morning break at this point in time. We will go off the  
8 record, and let's go back on at -- we will be back on at  
9 10:55. I'm sorry. Not 10:55. Let's see -- 10:35.

10 (Recess taken from 10:19 a.m. to 10:37 a.m.)

11 CHAIR MITCHELL: Back on the record, please.  
12 Ms. Jagannathan, we are with you.

13 MS. JAGANNATHAN: Thanks, Chair Mitchell. And  
14 that's the benefit of taking a break. I went through my  
15 notes and crossed some things off, and I think I'm all  
16 done with redirect. Thank you.

17 CHAIR MITCHELL: All right. Questions from  
18 Commissioners, beginning with Commissioner Brown-Bland?

19 COMMISSIONER BROWN-BLAND: I don't have any  
20 questions.

21 CHAIR MITCHELL: Okay. Commissioner Gray?

22 COMMISSIONER GRAY: No questions.

23 CHAIR MITCHELL: Commissioner Clodfelter?

24 COMMISSIONER CLODFELTER: Yes. Thank you.

1 Just a few.

2 EXAMINATION BY COMMISSIONER CLODFELTER:

3 Q Mr. Huber, the scope of the comprehensive  
4 study, I want to be sure I understand the contemplated  
5 scope that the Company has in mind. We've been  
6 discussing in the testimony from this panel a number of  
7 rate design issues. We've been also discussing a number  
8 of cost of service issues. Will the study encompass  
9 elements of both or just of one of those two?

10 A (Huber) Sorry, Commissioner. Can you repeat  
11 the last part of the question?

12 Q Will the study that the Company contemplates  
13 encompass elements of both aspects, both rate design and  
14 cost of service, or just one of those two?

15 A So it's primarily going to be focused on rate  
16 design; however, rate design in a sense translates cost  
17 of service, right? It translates, you know, marginal  
18 cost, right, embedded costs. And so there will be  
19 discussion and analytics around how well rate designs  
20 match an underlying, you know, cost -- you know, the cost  
21 of service. How efficient is that rate design in  
22 aligning with cost to serve? So to that extent they'll  
23 have some interface, but we likely wouldn't be getting  
24 into, oh, well, you know, we should change this allocator

1 or look at that allocator. It will be more through that  
2 translation from cost to serve to rate design and  
3 pricing.

4 Q Thank you for that. I'm glad I asked the  
5 question. I had a somewhat different understanding from  
6 Mr. De May that perhaps it might be a little more  
7 comprehensive than that, but we'll think about that one.  
8 I appreciate your answer. Thank you, sir.

9 Ms. Hager, one for you. Are you there?

10 A (Hager) I'm here.

11 Q Okay. And you can hear me okay?

12 A I can.

13 Q Great. In your rebuttal testimony, one of the  
14 things you say is that the advocates for the  
15 Summer/Winter Peak and Average Method do not follow their  
16 argument to its logical conclusion. And that's actually  
17 what several of the expert witnesses for some of the  
18 industrial and commercial customers also say, almost in  
19 exactly the same language, is that the advocates don't  
20 follow their argument to its logical conclusion. And I'm  
21 curious, have you ever done the exercise of carrying it  
22 out to its logical conclusion?

23 A No, I have not.

24 Q Do you know if anyone has?

1           A     I think some of the other cost of service  
2 methodologies that will be looked at, particularly with  
3 regard to the Public Staff settlement, the one that does  
4 Base Intermediate and Peaker, I think that would be  
5 probably the closest to that. I can't say for certain,  
6 but I think that's -- I think that would be the closest  
7 to what you're suggesting.

8           Q     I ask this because I sort of feel like somebody  
9 has told me there's a Boogeyman under the bed, but nobody  
10 has looked yet, and so I don't really know until I look  
11 whether there is one and whether I should be afraid of it  
12 or not. So I'm really trying to get some assistance on  
13 seeing what would happen if we not only applied the logic  
14 of the Summer/Winter Peak and Average Method to the  
15 demand component, but also to the energy allocator for  
16 operating and variable expenses. I'm just curious to see  
17 if I can get any assistance on whether that exercise has  
18 ever been performed.

19          A     Right. I understand.

20          Q     Thank you. Did you listen to Mr. Jay Oliver's  
21 testimony? Were you able to listen to it?

22          A     I was. I heard most all of it. I may have  
23 missed a little bit, but I heard most all of it.

24          Q     Yeah. When -- well, you've read -- have you



1 read his prefiled testimony?

2 A It's been a while since I read it.

3 Q Okay.

4 A I don't -- I don't recall it specifically.

5 Q Is it your understanding that Mr. Oliver  
6 believes that the programs proposed in the Grid  
7 Improvement Plan are justifiable based upon measurable  
8 and quantifiable benefits?

9 A My understanding of his testimony is that he  
10 believes the programs are justifiable based on their  
11 overall benefits, but in request to -- by the stakeholder  
12 group to quantify benefits, they did make that effort and  
13 quantified essentially only outage cost benefits and that  
14 that provided something quantifiable for stakeholders to  
15 look at, but that in his view, you know, as I heard him  
16 say, this program, the GIP program, does a lot of things  
17 and, oh, by the way, it has some good reliability  
18 benefits that can be measured in terms of outage costs.

19 Q Thank you for that. He does believe, though,  
20 that with respect to those programs where a cost-benefit  
21 analysis was performed, that -- I think I heard him say  
22 he's prepared to stand behind those benefits and say they  
23 will be delivered. You heard him say that, too?

24 A I know I heard him say he stands behind the

1     analyses that were done. I'm not sure I heard the "and  
2     they will be delivered." I think one of the things I  
3     heard is they'll be constantly evaluated and reevaluated  
4     and looked at, and if they're not working, they'll stop,  
5     and if they're working better than they thought, they'll  
6     speed up and that sort of thing.

7            Q     That's fair. You say in your rebuttal, and so  
8     I won't question you extensively about this, that you  
9     have some familiarity with the Grid Improvement Plan  
10    programs, but haven't studied them yet in depth. And so  
11    I don't want to take you too far down the road, but I do  
12    want to ask you a couple of questions about, if we can,  
13    about how some of the cost associated with those programs  
14    will be classified.

15            Most of them will be functionalized as  
16    distribution cost. I think that's fairly apparent from  
17    the nature of the programs and where the expenditures  
18    will be made. They'll be functionalized in the  
19    distribution system. But I really want to focus more on  
20    the classification. Are they demand related, energy  
21    related, or customer related?

22            And so one of the programs is the Integrated  
23    Volt/VAR Control program which will allow the Company to  
24    operate the grid at a lower voltage. And as I understand

1 Mr. Oliver, one of the results of that will be a capacity  
2 benefit for the system as a whole. Need less operating  
3 reserves. Need less capacity reserves. Would that be  
4 considered a -- for classification purposes a demand-  
5 related cost, an energy-related cost, or a customer-  
6 related cost? If what the program is delivering is  
7 capacity, functionally equivalent of additional capacity,  
8 how would you classify that?

9 A Commissioner Clodfelter, I don't know exactly  
10 how those -- I don't know exactly what those assets are  
11 and, therefore, I don't know what category they're going  
12 into and, therefore, I don't know how they would be  
13 classified. I'm sorry. I'm just -- I understand the  
14 concept of the system. I don't know the mechanics of  
15 what is installed to make it work.

16 Q Well, what would you need to know?

17 A What FERC account they fall into. So if they  
18 fall into generation, they're clearly -- they're clearly  
19 allocated based on Summer CP. If they fall into  
20 transmission, they're allocated on transmission demand.  
21 If they fall into distribution, then they would be  
22 allocated first with minimum system and then the  
23 remainder with demand. To the -- and that's to the  
24 extent that the things we're talking about are assets.

1 If they fall into the customer class, then they would --  
2 by default -- all of these is where they would default.

3 Now, that doesn't mean that, for example, as  
4 we've talked, you know, by statute we pull out the EE and  
5 DSM costs and do them a little bit differently. I think  
6 that's something that can be looked at, but barring any  
7 effort or barring any, you know, deliberate attempt to  
8 adjust them, they will simply follow how the assets in  
9 that FERC account are allocated.

10 Q We'll follow the FERC account in order to  
11 classify whether they're energy, demand, or customer  
12 related. Do I understand you correctly?

13 A Yes.

14 Q And so even if the functionality they deliver  
15 is the equivalent of a generation asset, if for FERC  
16 accounting purposes they're placed in a non-generation  
17 account, they wouldn't be classified as demand?

18 A I'm saying unless we made a deliberate effort  
19 to do that. Now, I will tell you one of the things  
20 that's running through my mind right now is this is not a  
21 new system on DEP's -- in DEP's system. And I am sure  
22 someone can tell me how we do that at DEP now. And so I  
23 think -- and I would expect that if it looks like that,  
24 that it would follow -- we would propose following the

1 same methodology. Perhaps someone can get that  
2 information pretty quickly.

3 Q That's fine. I'm not going to go any further  
4 with this. I really just want to introduce the point for  
5 the Company and all of us to think about, is one of the  
6 things that's happening here with the evolution of the  
7 distribution grid, and we're seeing in so many different  
8 ways, is that the distribution grid is now beginning to  
9 deliver services to the system that traditionally have  
10 only been available either from generation assets or, in  
11 some cases to a lesser extent, transmission bulk power  
12 assets, and that's happening all throughout the system,  
13 so there's been a blurring of the sharpness of those  
14 distinctions, and I'm really trying to explore to what  
15 extent we're going to be grappling with that when it's  
16 time to deal with the Grid Improvement Plan for cost  
17 recovery purposes.

18 I think you understand the point, and I'll  
19 leave it with that; am I correct?

20 A I do understand that, and just allow me one  
21 additional thought, is the things -- kind of things  
22 you're talking about I believe can be looked at because  
23 you're talking about still electrons and how they flow  
24 and how they impact the flow of electrons and those sorts

1 of things. I still would differentiate that from  
2 benefits received. I still think you've got to stay  
3 focused on the electric system for the purpose of cost  
4 allocation.

5 Q I understand you, but I'm really focusing upon  
6 traditional methods of classifying cost for cost  
7 allocation purposes as energy related, demand related, or  
8 customer related.

9 A Yes.

10 Q I'm not going down -- I'm not talking now about  
11 the benefit issue. You understand that?

12 A I understand.

13 Q Okay. Thank you. Mr. Huber, back to you with  
14 a question, and I'll introduce it and others may want to  
15 take it further. In the comprehensive rate design study  
16 will the issue of rates and charges and services for --  
17 charges for services for net metering customers be part  
18 of that equation or not?

19 A Yes, absolutely. That will be part of the  
20 comprehensive rate review.

21 COMMISSIONER CLODFELTER: Madam Chair, we could  
22 take -- I could take a lot more time this morning, but I  
23 think I'm going to stop there.

24 CHAIR MITCHELL: All right. Commissioner

1 Duffley?

2 COMMISSIONER DUFFLEY: No questions.

3 CHAIR MITCHELL: All right. Commissioner  
4 Hughes?

5 COMMISSIONER HUGHES: Yes. I've just got a few  
6 questions for I believe Mr. Huber, but if someone else  
7 wants to chime in, that's fine.

8 EXAMINATION BY COMMISSIONER HUGHES:

9 Q Mr. Huber, from what I understand, you will  
10 likely be very important in the Company's implementation  
11 of this rate design study if it moves forward. I don't  
12 know if you'll be the project manager, but it's fair to  
13 say that you'll be kind of one of the architects of this  
14 study?

15 A (Huber) That's correct.

16 Q So in your testimony you talked a little -- in  
17 your rebuttal you talked a little bit about some of the  
18 aspects, I guess, some of your visions and how you agreed  
19 with some other -- particularly witness Floyd's vision.  
20 I think there was at one point -- I'm reading it now; I  
21 don't think you need it in front of you -- just the six  
22 points about what would be the, you know, the driving  
23 objectives of this study, and one of them was give  
24 consumers appropriate information and the opportunity to

1     respond to that information by adjusting the usage. Is  
2     that -- do you remember that as a bullet as one of the --  
3     do you agree that that's one of the main goals of what  
4     the rate study would look at?

5           A     Yes. I recall that.

6           Q     So I'm really interested in this concept of  
7     what customers do with their rate design information  
8     because I -- you know, I think we've talked a lot about  
9     rate design being an art, and I think some of the  
10    Intervenors have talked a lot about sending pricing  
11    signals in different ways. I'm curious to just hear some  
12    really quick views of yours on what's the state of the  
13    industry related to kind of predicting behaviors. And in  
14    particular, I'm curious if you have views about some of  
15    the billing innovations and what impacts that has on rate  
16    design. I think you mentioned in your testimony AMI, but  
17    there's a number of billing -- what I would consider to  
18    be billing, not rate design, approaches that Duke is  
19    either using or rolling out that would seem to have a  
20    very big impact on the way customers get their  
21    information. So that idea of giving customers  
22    information seems in many cases to be impacted by billing  
23    practices as much as rate design.

24                   So could you just comment on some of the



1     billing practices that Duke is rolling out and what  
2     impact you think they will have on rate design,  
3     specifically the equal payment plan that I believe Duke  
4     has been fairly aggressive, I would say, just at least on  
5     their website and things, about pushing out AMI direct  
6     draft, some of those things? Can you just comment a  
7     little bit about that?

8           A     Yeah. I could probably talk all day on some of  
9     these topics, so I'll try to be brief, but, you know --

10          Q     Well, it would be fine with me, but maybe not  
11     from my colleagues, so maybe we should be briefer.

12          A     I think in general there's a greater trend to  
13     having more customer focus and centric forms of  
14     communication, so really identify what market segment or  
15     customer segment do you need to communicate to? What are  
16     the best channels and mediums to reach those customer  
17     segments? And then what rate designs are those customer  
18     segments, you know, most apt to, you know, to join, and  
19     how can we leverage their natural inclinations in these  
20     customer segments to the benefit of not only their bill,  
21     but also to the system in general to nonparticipants?

22                 And so, you know, you mentioned budget billing,  
23     for example. There's a good segment of the population  
24     that likes bill certainty, right? And one of the key

1 drivers of customer dissatisfaction is higher than  
2 expected electricity bills, and this is incredibly  
3 important when we know that most, you know, Americans out  
4 there, they only have about \$500 or so in savings, maybe  
5 less now because, you know, due to the pandemic, right?  
6 And so a higher than expected electricity bill can be  
7 highly detrimental to the budget of a family, right? So  
8 the question is, well, what could we provide to maybe  
9 this customer segment? I'll use them as the example just  
10 for ease. Well, you would -- you know, you would have an  
11 app that could clearly define, hey, you're on a bill  
12 certainty product. You know, your rate is fixed for this  
13 month; however, you have elected to reduce that monthly  
14 rate to be a part of our demand response program, say,  
15 and you'll get, you know, a \$5 discount -- I'm just  
16 making this up -- per month to be a part of that, and  
17 we'll show you on the app, you know, how much, you know,  
18 savings maybe that thermostat can provide, but if you do  
19 something extra, we have another -- like a type of  
20 behavioral demand response, so you lower your thermostat  
21 more than, say, anticipated, they can go to their app and  
22 it can do real-time coaching.

23 Now, this is something we don't have yet  
24 enabled, but we're exploring, of this would save you "x"

1 amount on your bill. So you're merging a customer's  
2 natural inclination to want certainty with them being  
3 able to respond dynamically to events, and then show them  
4 in real time what that could actually save them if they  
5 go, you know, a step beyond, for instance.

6 So with -- you know, and this gets into  
7 billing, you know, and some -- and prepaid as well.  
8 There's so many different things you can do to visualize  
9 it to the customer on the computer or the app so that  
10 they can see how much they have left, how their behaviors  
11 are impacting their bill, and then tips to help them  
12 along. And we're getting so sophisticated now with AMI  
13 and AI coming together, all that AMI data and advanced AI  
14 understanding, so that we can start to look -- and,  
15 again, this is a bit down the road, but we can start to  
16 look and say, hey, we think your AC is starting to go;  
17 it's using more energy than normal, and we can help with,  
18 you know, preventative maintenance on that, right, or get  
19 ahead of that.

20 Those are the things that I'm really excited  
21 about that we're starting to be on the cusp of with  
22 merging AMI and big data analytics. I'll pause there  
23 because I can keep going, but --

24 Q Yeah. And I -- again, I could keep listening,

1 but maybe we should spare our -- the other folks on the  
2 hearing. Well, that's helpful. Do you have just a rough  
3 estimate -- I know you're not in the billing area -- but  
4 a rough estimate within 5 percent of what the current  
5 Duke budget billing subscription rate is for Residential  
6 class?

7 A Oh, man. Yeah. I could get that for you. I  
8 thought it was in the 15 plus percent range, but I would  
9 need to confirm that.

10 Q Okay. No, no. Fair enough. I'm sure we can  
11 get it. I just was --

12 A Yeah.

13 Q -- I was just curious based on the content.  
14 And everything you just said is going to -- your vision  
15 going to be part of this rate study, looking at these  
16 intersections between AI and AMI? Is that your vision,  
17 that that would occur in this comprehensive rate survey  
18 -- I mean, excuse me -- comprehensive rate study?

19 A Yeah. And so, you know, what I've been trying  
20 to do to prepare for this, so I haven't just been, you  
21 know, sitting around waiting for your Order, we're  
22 basically procuring a state-of-the-art analytics platform  
23 to help us with this comprehensive rate review. So we're  
24 able to take actual customer, you know, 15-minute, 30-

1 minute data, put it all together into the system and run  
2 what-if scenarios and run analyses, cluster analysis,  
3 load architect analysis. We're able to crunch all this  
4 data and say, all right, well, what if we segmented this  
5 class differently or what if we changed this rate design?  
6 How -- you know, what would be the impacts to the  
7 customer, to the Company, to other, you know, customers?  
8 And this is something that normally in the past you --  
9 first, you couldn't even do it because you didn't have  
10 the AMI data, but if you did have the AMI data, it would  
11 take days to run, right, multiple days to run these  
12 scenarios of crunching just this huge amount of data.  
13 And the Company, Duke, has just been really great of  
14 starting to figure out ways to take this data and create  
15 platforms to quickly crunch, you know, a big calculation.

16 And so this platform that we're building for  
17 the comprehensive rate review will be able to quickly  
18 produce results and what-if scenarios and think through  
19 how does a specific approach to rate design impact  
20 customers, right? So we know there's a difference  
21 between the philosophy of rate design between DEP and  
22 DEC. Well, how will, you know, make -- you know, taking  
23 a best practice over here and putting it in over there,  
24 how will that impact, you know, the customer and revenue

1 collection and the price signals? So those are the types  
2 of things that we're really going to tease out, and we're  
3 going to have the platform to do it, which is the most  
4 important thing.

5 After that, I don't want to put my hand on the  
6 scale in any direction because, frankly, I'm not in the  
7 position yet to tell folks, hey, I think we should go  
8 with this particular methodology and this segmentation of  
9 Large Industrial. I'm not there yet. I want to make  
10 sure that this is a stakeholder and data driven led  
11 collaborative and hear from actual customers, hear, you  
12 know, some of the past issues, where we see things going  
13 forward, and make some of those decisions together, and  
14 I'll just infuse it with my knowledge from, you know, the  
15 past worlds that I've lived in which has been technology,  
16 the consumer advocate world, and consulting, where I've  
17 been on the front lines of a lot of states either driving  
18 change or responding to change, and I can bring that  
19 experience, those best practices, those insights, but  
20 really I want to make sure that the outcome is custom and  
21 tailored to North Carolina on-the-ground realities and  
22 goals.

23 Q Great. Well, and that all leads in, so that's  
24 great to hear. And that's what I was hoping the answer

1     was going to be, but also with analytics, it does seem to  
2     sometimes take longer than you think it will and -- so my  
3     last question was -- I think you partially answered it  
4     because you said you're already getting ready to go, but  
5     I was just -- the time frame of this study, I heard -- I  
6     think one of the other witnesses talked about it being a  
7     year-long study. In your testimony I think you said, and  
8     it just -- just seems a little bit ambitious to me, that  
9     it would be done by the second quarter of 2021. Is that  
10    still -- is that still the timeline where we can expect  
11    results for all the great things that you just said you  
12    wanted to do by 2021?

13           A     Commissioner, I'm so glad you asked that  
14    question. So, you know, given the unprecedented, you  
15    know, issues and the delay that those issues have caused,  
16    what I'm proposing is to have a pretty comprehensive  
17    roadmap and report a year after the Final Order in this  
18    case. That means I'm obviously -- I'm preparing now to  
19    make this the most, you know, constructive and fruitful  
20    process. Of course, I haven't -- you know, we haven't  
21    started anything formal yet and we haven't, you know,  
22    reached out to stakeholders. I'm trying to get the  
23    platform to really enable this, but you're absolutely  
24    right, this is an incredibly, you know, ambitious

1     undertaking. It's a lot of work. I want to move as  
2     quickly as possible, though, because I really feel that  
3     we can create some really, you know, quick wins, and I  
4     feel like we'll be able to get consensus from  
5     stakeholders rather quickly on a few items, you know.  
6     And I mentioned that thermostat, you know, BYOT as an  
7     example of something that just made so much sense, let's  
8     do that right away.

9                 So I think we'll have some of those in this  
10    process that come out and we won't wait for the final  
11    report, and others that will take a little bit more time,  
12    there could be follow-up studies, but I really do want to  
13    move as quickly as possible to start modernizing some of  
14    our pricing and, you know, tackling some of these issues.

15                Now, when those can actually be implemented are  
16    partly a function of what type of proceeding would be  
17    needed to enable it, you know, to enable a new rate  
18    design switch or, you know, things like that. So -- but  
19    in general, it will a be a year from the Final Order in  
20    this case, but just be assured that we will be starting  
21    very, very quickly after that and it will be pretty  
22    heavy.

23                Q     Great.

24                COMMISSIONER HUGHES: No further questions.



1 Thank you.

2 CHAIR MITCHELL: All right. Commissioner

3 McKissick?

4 COMMISSIONER McKISSICK: Yeah. Just one or two  
5 questions. First, I'd really like to thank the attorneys  
6 who have been a part of this particular cross examination  
7 and, of course, direct examination because so many of the  
8 questions that I had in the back of my mind have been  
9 asked and answered, so it will certainly substantially  
10 reduce the time that I will need. Just a few quick  
11 follow ups.

12 EXAMINATION BY COMMISSIONER McKISSICK:

13 Q And I guess, Ms. Hager, I want to ask you this  
14 first. I mean, you're talking about developing cost of  
15 study services, studies, you know, using six different  
16 methodologies. Do you have any idea what those  
17 methodologies would be at this time? I mean, are there  
18 certain traditional methodologies that might be used or  
19 hybrid type models? What is it that is the --

20 A (Hager) So we have a Settlement Agreement with  
21 the Public Staff that outlines those methodologies that  
22 will be used for allocating generation related cost -- if  
23 you'll give me just a second -- and they're mostly  
24 traditional. Hold on. Hold on. Here it is. So we're

1 going to -- we currently file a Summer Peak, a Winter  
2 Peak, and a Summer/Winter Peak and Average. That's what  
3 we filed for this case. We've agreed with -- in the  
4 CIGFUR settlement to file a Summer/Winter Peak, which  
5 will just be an average of Summer and Winter Peaks. And  
6 then we have agreed with the Public Staff to do one  
7 called Base Intermediate and Peak, and that's the one I  
8 think I was discussing maybe with Commissioner Clodfelter  
9 about that is -- it's more of an innovative -- it's a --  
10 I don't know if it's a new approach, but it's one that's  
11 been coming -- has been coming up.

12 And then we're going to do a 12 Coincident  
13 Peak, so a monthly average -- an average of the 12  
14 monthly peaks. And then we said any other identified  
15 relevant methodologies. So they are, I would say, mostly  
16 traditional with one that is more nuanced.

17 Q And let me ask you this. I know when you  
18 started discussing issues related to cost of service, you  
19 indicated you did not like to consider benefits. And I'm  
20 -- I guess I'm trying to drill down a little bit more and  
21 try to understand why benefits are something that you  
22 take a step away from. I mean, is it the ability to not  
23 be able to sufficiently quantify them or are -- what's  
24 the challenge, what's the difficulty in looking at

1     benefits, because I would think that you could come up  
2     with a matrix or a way of doing it that might not be  
3     necessarily traditional, but that would take that -- take  
4     them into consideration. So maybe you can help me with  
5     why benefits are challenging or problematic from your  
6     perspective.

7           A     Yeah. Thank you for that question. So I think  
8     several things come to mind. One is, I think -- first of  
9     all, quantifying benefits, as I've said, is very  
10    subjective, and you've heard some examples of that. They  
11    also -- if you just look at the cost-benefit analyses  
12    that were done for GIP, they only quantified one small  
13    aspect of the overall program, and there was a lot of  
14    debate about those -- the metrics that were used for  
15    that. You know, they were national, they weren't state.  
16    Should you -- you know, should you spend money to do it  
17    on a state basis? So I think there's a lot of  
18    differences of opinion of how to do that.

19               Essentially, how that's done is by survey and,  
20    you know, I've actually smiled and thought if industrial  
21    customers knew that if they were asked the question  
22    what's the cost of an outage and it determined how costs  
23    were allocated to them, they might have a different  
24    answer than what they've answered otherwise. As I said,

1 everybody wants a smaller piece of the pie when it comes  
2 to cost of service.

3 I think additionally, you have the -- if you  
4 take it to its -- take it to kind of an extreme  
5 conclusion, which is allocate all electricity cost based  
6 on benefits, then you've completely upended the way that  
7 costs have been allocated in the past. And as has been  
8 said, any time you start changing allocation  
9 methodologies or changing even rate design structures,  
10 you create winners and losers. And so you're likely to  
11 have, you know, a lot of pushback from that, you know,  
12 from that exercise.

13 And so, you know, in my view, the -- you know,  
14 the place to look at benefits is in deciding what the  
15 Company should pursue. You've got to have some way to,  
16 like I say, prioritize which things that you go forward  
17 with. Well, when you carry that into cost of service, it  
18 really has the potential, I think, to create some, you  
19 know, artificial allocations based on things that are  
20 very, very difficult to quantify.

21 So those are some of the main reasons I -- that  
22 I would believe it's not appropriate.

23 Q I guess the follow up would be have you given  
24 it any great thought and reflection or ever thought

1 about, if not in-house, a consultant being brought in to  
2 look at what it might look like if we started, you know,  
3 considering benefits as a variable and doing it  
4 discretely and identifiable and weighing it in a way that  
5 it could be insightful or helpful in terms of how to  
6 think of cost?

7 A I have thought about it a good bit and, you  
8 know -- and I have also discussed it with the Company's  
9 cost of service folks, and I think generally we simply  
10 believe that it's -- the place for it is not in cost of  
11 service. You know, is there a place for that in  
12 quantifying benefits to determine which GIP programs get  
13 raised to the, you know, top of the stack or other  
14 things. You know, if you look at some of the -- even the  
15 low-income collaborative, you might want to use cost-  
16 benefit analyses there to determine, you know, what  
17 actions should be taken. And that might be the proper  
18 place for those -- to do more analytics to try to get  
19 more of a quantification of benefits.

20 Q And I guess you mentioned the Grid Improvement  
21 program. I mean, let's say that it was determined that  
22 98 percent of the benefits are going to  
23 commercial/industrial users. How would you -- it sounds  
24 to me, based upon the explanations I've heard previously,

1 in terms of trying to determine how that would go back  
2 into cost of service, you'd go back to FERC and its  
3 account categories and would go back and try to establish  
4 how different components of the Grid Improvement program  
5 would fit in with traditional categories to then kind of  
6 allow it to flow back into cost of service analyses; is  
7 that correct?

8 A That is correct, but the thing that I would  
9 note is that I've heard that statement that 98 percent of  
10 the benefits are for commercial/industrial, and I think  
11 if you drill down on that some, I think what you've heard  
12 is that -- that that is only the reliability portion and  
13 it was -- it was that portion that was pretty easily  
14 quantified and that there would be lots of arguments that  
15 would say I understood Mr. Oliver to say that over 90  
16 percent of the customers' impact to the residential by  
17 the self-optimizing grid, so, you know, there's a logic  
18 there that would say they receive 90 percent of the  
19 benefit.

20 So it's -- it's -- I think we have to be  
21 careful -- it's nice when you have something you can  
22 quantify, when you can put a number on something, but we  
23 need to be careful about not giving that more weight than  
24 -- than it should have, and particularly when it comes to

1 cost allocation.

2 Q Now, let me ask you this, in terms of this  
3 exhibit of the Public Staff, I think it was originally  
4 identified as Public Staff 41, but it was introduced as a  
5 different exhibit number during the course of, I guess,  
6 your testimony, but it was the guide that was done by the  
7 Regulatory Assistance Project dealing with Electric Cost  
8 Allocation for a New Era --

9 A Yes.

10 Q -- and you indicated that, you know, it favors  
11 distributed energy resources, but I mean to what extent  
12 would you be willing to do a deep dive and look at the  
13 standards that are discussed there and the -- and the way  
14 -- and the approach and the methodologies that it  
15 articulates in terms of moving forward with the analysis  
16 that's going to be done dealing with cost of service and  
17 I guess, likewise, at some point, you know, dealing with  
18 rate design?

19 A Uh-huh. So to date, what the Company has  
20 committed to do is reflected in the settlements in terms  
21 of what it's willing to look at. And as not being the  
22 person who is in charge of cost of service, I am  
23 reluctant to commit the Company for what it is willing to  
24 do. I think that is something that we'd have to have

1 someone else commit to.

2 COMMISSIONER McKISSICK: Well, thank you very  
3 much for your testimony. I appreciate it, and I look  
4 forward to seeing how this all evolves. And Mr. Huber,  
5 one time you mentioned to me looking at Dr. Bonbright's  
6 book. Based upon your recommendation, I did. Thank you.  
7 No further questions, Madam Chair.

8 EXAMINATION BY CHAIR MITCHELL:

9 Q All right. Mr. Huber, I have one question for  
10 you. You indicated that the rate design study that you  
11 all are going to conduct, did that include net metering?  
12 I'm getting a lot of feedback from the line here. Has  
13 the -- has the Company performed the investigation  
14 required by the net metering provision of House Bill 589  
15 on cost and benefits associated with the technology, or  
16 will that be part of the study that you all are  
17 undertaking? Just -- can you just help me understand  
18 where things stand there?

19 A (Huber) Yeah. Thank you for -- for the  
20 question, Chair Mitchell. So we have -- to my knowledge,  
21 we have not conducted that study. That would fit within  
22 this comprehensive rate review as we look at partial  
23 requirement customers, the benefits, the cost, and from  
24 different temporal direction, so short term verse long



1 term. And so this will absolutely, you know, be a part  
2 of the comprehensive rate review and making sure we --  
3 we, you know, follow on everything we need to study and  
4 hit on per statute.

5 Q Okay. Thank you, Mr. Huber.

6 CHAIR MITCHELL: All right. Any further  
7 questions from the Commission?

8 (No response.)

9 CHAIR MITCHELL: All right. Hearing none, we  
10 will go to -- we will turn to questions on Commissioners'  
11 questions. We will start with the Public Staff.

12 MS. EDMONDSON: No questions.

13 CHAIR MITCHELL: Okay. Attorney General's  
14 Office?

15 MS. TOWNSEND: No questions. Thank you.

16 CHAIR MITCHELL: Any questions from other  
17 intervenors?

18 MR. NEAL: Chair Mitchell, this is David Neal.

19 CHAIR MITCHELL: All right. You may proceed,  
20 Mr. Neal.

21 MR. NEAL: Thank you.

22 EXAMINATION BY MR. NEAL:

23 Q First, Ms. Hager, in response to questions from  
24 Commissioner McKissick, you were talking, again, about

1     this question of how cost allocation relates to benefits.  
2     I just have a -- it's a hypothetical question, if you  
3     will. If a grid improvement cost was allocated to one  
4     class and one class alone, and the Company's own evidence  
5     showed that all of the economic benefits from that Grid  
6     Improvement Plan cost benefitted a different rate class,  
7     would you agree that that would be an unfair allocation?

8           A     (Hager) Not necessarily. I think if you think  
9     about how cost allocation is done, there are big buckets  
10    of costs, and inevitably you will have assets within that  
11    -- that FERC account that benefit only one group or only  
12    another group, but then they're allocated based on -- in  
13    the case of distribution cost, customer and non-  
14    coincident peak. So I don't think you can isolate -- I  
15    think you can isolate any group of assets and say isn't  
16    it unfair to allocate those costs to this group of  
17    customers, and I think that is -- is not an appropriate  
18    way to look at it because it simply is -- it's you look  
19    at it by the group -- by the total of the assets within  
20    that account.

21          Q     So it's your testimony that if the Commission  
22    were to determine that a particular Grid Improvement Plan  
23    investment, again, based on the Company's evidence, was  
24    providing a material benefit to one group of customers,

1 one class of customers, and then a different class of  
2 customers was the only class asked to pay for that,  
3 you're saying that that would be fair?

4 A Well, obviously, we would follow any Commission  
5 order that directed us differently, but barring that, we  
6 would not differentiate in that case. And I'll point out  
7 again that the cost benefit analyses only measure a very  
8 narrow aspect of the benefits of the GIP program.

9 Q I hear that, but to be clear about the  
10 hypothetical, I was asking a hypothetical of if the  
11 Company's evidence showed all of the benefits went in one  
12 direction and all of the cost went another direction,  
13 that doesn't change your answer?

14 A It does not.

15 Q Mr. Huber, good morning.

16 A (Huber) Good morning.

17 Q It's good to see you.

18 A Likewise.

19 Q Following up on some questions from  
20 Commissioners Clodfelter and McKissick, the -- you would  
21 -- well, actually from Commissioner Hughes first, you  
22 would agree that the conversation you had relied on the  
23 ability of customers to respond to price signals, to  
24 somewhat change their behavior or make investments that

1     would be responsive to those price signals; is that a  
2     fair characterization?

3           A     I think that's fair. And just, you know, it  
4     can be a wide range of definitions within price signals,  
5     so it might not be, oh, you know, you have a critical  
6     peak price of 25 cents right now. It could be if you  
7     reduce your demand, we'll give you a \$3 bill credit for  
8     today, you know. It could run the whole gamut.

9           Q     And putting that example to the side, you would  
10    agree that if a larger and larger portion of a  
11    residential customer's bill was taken up by a fixed  
12    charge, that mathematically speaking that reduces the  
13    amount of their bill that could then respond to price  
14    signals or in some way do some of the incentive things  
15    you were talking about with Mr. Hughes?

16          A     Well, I guess it depends on the customer's  
17    goals, all right. So if the customer has a goal to  
18    electrify everything in their house, including their car,  
19    they would -- they would want a higher fixed charge as  
20    part of their bill in order to have the optimal economic  
21    benefits of electrification. So -- and that's where, you  
22    know, it really gets into what different customer  
23    segments are all about. Some may want some type of  
24    renewable energy product, right, some might want very

1 complicated, sophisticated price signals, and others  
2 might want more bill certainty. And so they don't  
3 necessarily mind that they have some lock-in because it's  
4 actually more important to them that they can budget --  
5 you know, they're on a fixed income, for instance -- than  
6 you know, have some impact by -- by, you know, changing  
7 how they do their lighting, for instance. So it really  
8 depends on the customer, I would say.

9 Q And I totally appreciate that. Did you have a  
10 chance to hear the testimony of Public Staff witness Jack  
11 Floyd during the consolidated hearing?

12 A Yes.

13 Q And so this question came up there, too, and,  
14 again, just thinking about it in terms of rate design as  
15 a tool that -- that would allow a customer to take more  
16 control over their bill and respond to price signals.  
17 Putting aside, you know, this question about an electric  
18 vehicle owner, for example, just in terms of responding  
19 to the price signals in a time of use rate or a critical  
20 peak pricing framework, the extent that a lot more of a  
21 bill comes from a fixed charge than from those volumetric  
22 rates, it reduces the incentive to respond to the  
23 signals; isn't that right?

24 A Well, yeah. Again, I'm just -- because it

1 really -- I think it depends, I think, you know, on the  
2 type of pricing product. I think if -- where you're  
3 going is a pricing product that has -- you know, where  
4 the customer has full exposure to the price risk, right,  
5 and so -- you know, because, for instance, you could have  
6 a type of bill certainty product where it would be fixed,  
7 you know, each month that they could plan on, but we  
8 could have a demand response -- behavioral demand  
9 response events where we could guarantee a savings of a  
10 certain amount in exchange for sort of, you know,  
11 response from the customer.

12 So, for instance, in Kentucky we're running a  
13 peak time rebate pilot right now, and that's, you know,  
14 hey, if you're able to reduce your demand, you will be --  
15 you'll save "x" amount or you'll get this type of bill  
16 credit, for instance. So their underlying bill could  
17 actually be locked and -- but at the same time they have  
18 equal to or more inclination to respond to a certain  
19 program or price signal that lies on top of it. So, you  
20 know, I guess it just really depends on exactly what type  
21 of, you know, rate design you're thinking of.

22 Q And Mr. Huber, if -- if the Commission ordered  
23 the Company not to use the Minimum System Method in the  
24 cost of service study and instead to use the Basic

1 Customer Method to allocate those distribution costs, you  
2 would agree that they could use that as a baseline in its  
3 upcoming rate design study, correct?

4 A Sorry. We -- what aspect would we use -- what  
5 aspect would we use? Sorry.

6 Q So earlier in the conversation with  
7 Commissioner Clodfelter you indicated that the focus of  
8 this upcoming process is really on rate design and not on  
9 cost of service. And I was just asking that if -- before  
10 you got underway with that stakeholder process, the  
11 Commission ordered the Company to stop using a minimum  
12 system in its cost of service study and to use the Basic  
13 Customer Method instead, that would then become the  
14 baseline for, you know, the rate design study moving  
15 forward, correct?

16 A Yeah, exactly. I think, you know, what I've  
17 tried to communicate is there's a lot of different  
18 variables, right, and you want to -- especially when you  
19 have something that's as big as a comprehensive rate  
20 review, you want to try to minimize the variables and so,  
21 you know, adjusting all your different cost of service  
22 allocators and your rate design at the same time is -- is  
23 a lot, right. And I want to clarify that there would  
24 still be some cost of service studies as part of the

1 comprehensive rate review, but they'd be more specific  
2 to, you know, individual customer cases or segments, if  
3 you will, so like net metering or, you know, large data  
4 centers, for instance, things of that nature, not getting  
5 into actual like allocators and things of that nature.  
6 You know, similar to what got established or what helped  
7 OPT-V get established, those types of cost of service  
8 studies.

9           So, yeah, we would take what the traditional  
10 method is, but I think what's really important is, as  
11 I've mentioned before, rate design translates cost to  
12 serve and also tries to marry it with marginal cost and  
13 so forth. And when you deal with really sticky subjects  
14 like distribution poles, right, you know, if I use less  
15 energy, does the pole shrink? If I use more, does it  
16 increase? How -- how do you send a price signal to  
17 recover that fixed infrastructure that really doesn't  
18 vary by usage?

19           And so, I think, you know, we're going to be  
20 looking at that and how to break down, potentially, and  
21 unbundle some of these costs. And so we'll be relying,  
22 you know, on the -- on, you know, whatever method the,  
23 you know, the Commission approves, don't get me wrong,  
24 but I think we're also going to be looking at how pricing



1 can marry up with the realities of the system that we see  
2 out there.

3 Q Thank you.

4 MR. NEAL: Chair Mitchell, no further  
5 questions.

6 CHAIR MITCHELL: All right. Any additional  
7 questions?

8 MR. PAGE: Chair Mitchell, this is Bob Page.  
9 May I ask a few?

10 CHAIR MITCHELL: You may proceed, Mr. Page.

11 EXAMINATION BY MR. PAGE:

12 Q I'd like to go back to Ms. Hager, if I could,  
13 please. Good morning again. Ms. Hager, in the questions  
14 you received from -- from the Commissioners, I think I  
15 detected your saying that you just wouldn't put as much  
16 reliance on what a cost-benefit study would show versus a  
17 cost of service study. Did I correctly interpret your  
18 answers?

19 A (Hager) Well, I'm not sure. Let me say it this  
20 way. In my view, cost-benefit analyses have a place, but  
21 that place is determining what programs, what -- you  
22 know, what actions should be taken. Those result in  
23 revenue requirements. And once you've established  
24 revenue requirements, you don't use cost-benefit analyses

1 to do cost of service studies. At least that's my  
2 recommendation.

3 Q For example, a useful place for a cost-benefit  
4 analysis would be if Duke was considering the  
5 implementation of a new program, and you wanted to find  
6 out before you spent money on it are the benefits that  
7 are going to accrue to the Company and the customers from  
8 this program greater than or less than what it's going to  
9 cost to put it in place?

10 A That's exactly correct. So, you know, let's  
11 talk about a couple of examples. It's nice when there  
12 are things that the Company is going to do that are sort  
13 of slam dunks, that the reductions in operating and fuel  
14 costs, you know, more than offset the incremental cost of  
15 the asset and so it's clear something should be done, but  
16 oftentimes is the case you're looking at things that will  
17 raise revenue requirements, and so you have to say, okay,  
18 how do I determine whether or not this is a good thing to  
19 do? I think, you know, an easy thing to do might be to  
20 say I'm not going to do anything that, you know, doesn't  
21 raise revenue requirements. I won't do anything that  
22 raises revenue requirements, but I don't think any of us  
23 would agree you get good results with that, so you  
24 ultimately have to do some -- some type of cost-benefit

1 analysis.

2           An example would be -- and this is from more of  
3 a layperson's standpoint -- if you're looking at doing  
4 things that reduce the amount of time a customer stays on  
5 hold when they call the customer service center, that's  
6 going to raise revenue requirements to do that, but  
7 you're going to be looking at customer satisfaction, at  
8 those sorts of things, and you're going to make a -- you  
9 have five options to choose from and, you know, one  
10 reduces it five seconds, one reduces it 20 seconds, but  
11 one costs five times as much as the other. To me, that's  
12 the kind of place where cost-benefit analyses should  
13 reside. And then once they are translated into revenue  
14 requirements, then move into looking strictly at the  
15 electrons and how they flow.

16           Q     All right. Let me just ask you about the  
17 evidence that has been offered that there's one cost-  
18 benefit analysis regarding the GIP program, grid  
19 investment, that says that the vast majority of the  
20 benefits of that program would flow to customers other  
21 than residential customers. Are you familiar with that  
22 evidence?

23           A     Yes.

24           Q     And I think I overheard you state that that was

1 derived only from one function which was reliability; is  
2 that correct?

3 A That is my understanding.

4 Q All right. If -- if I'm a manufacturing  
5 customer and I have my own standby or emergency  
6 generation, then, you know, up to a point, you know,  
7 where Duke is already around 99 percent reliability, that  
8 extra one percent is probably not as important to many at  
9 the lower rate, wouldn't you think?

10 A Obviously, individual customers will experience  
11 these benefits differently, and that is part of the  
12 challenge in the methodology that's been used here as  
13 more of a national average. That would take into account  
14 that some customers would value outages -- would not  
15 value, but would see the cost of outages is higher than  
16 others, and that's been, you know, molded into some sort  
17 of, you know, average type of rate. But you're correct,  
18 every customer will perceive the benefits of every  
19 program, every action the Company takes, differently.

20 Q All right. And just one other example on that,  
21 if I'm a manufacturer and I have a process where my  
22 production is not harmed if I'm interrupted -- in other  
23 words, I am not an aluminum smelter where an interruption  
24 could ruin a whole batch -- if I have a manufacturing

1 process like that and I volunteered for an interruptible  
2 type rate, then obviously I'm saying that cost is more  
3 important to me than reliability, am I not?

4 A I believe that is true. I probably should  
5 mention, Mr. Page, too, that -- just Mr. Oliver is  
6 probably kicking me under the table somewhere -- that  
7 there are a lot more benefits to the GIP than just  
8 reliability benefits, and your customers will see some of  
9 those benefits even if they won't see as much as perhaps  
10 others.

11 Q But those benefits, whether they be small or  
12 large, are not how you would allocate the cost of  
13 providing those benefits; am I correct?

14 A I certainly do not advocate allocating cost  
15 based on benefits.

16 Q Thank you very much.

17 MR. PAGE: That's all I have, Madam Chair.

18 CHAIR MITCHELL: All right. Any additional  
19 questions on the Commissioner's questions from the  
20 Intervenors?

21 MS. CRESS: Yes, Chair Mitchell. This is  
22 Christina Cress.

23 CHAIR MITCHELL: All right. Ms. Cress, you may  
24 proceed.

1 MS. CRESS: Thank you. I believe these  
2 questions are going to be directed to Ms. Hager,  
3 following up on some questions and discussion between Ms.  
4 Hager and Commissioners Clodfelter and McKissick. And I  
5 do want to apologize in advance. I am using one device  
6 for audio functionality and another device for camera  
7 functionality, so there might be some lag or issues here,  
8 but I'm just trying to make do the best I can with the  
9 situation I've got.

10 EXAMINATION BY MS. CRESS:

11 Q So that said, Ms. Hager, the interruption cost  
12 estimates for the Residential class included as part of  
13 the GIP analyses were pre-COVID, correct?

14 A (Hager) Yes. That would be correct.

15 Q And so those estimates don't reflect the fact  
16 that a significant portion of the workforce has worked  
17 from home in 2020; is that right?

18 A That's correct, and I think that illustrates  
19 the changing nature of benefits realized by customers.

20 Q I believe Mr. Jenkins asked you about the  
21 impossibility of valuing interruption cost for that  
22 residential customer who is on a 24-hour ventilator; is  
23 that right?

24 A Yes.

1           Q     But in today's COVID-19 era, there's also a lot  
2     more common and perhaps less extreme examples. Just take  
3     one, for example, that all of us here today should be  
4     able to relate to, what about an expert witness  
5     testifying from home in this virtual proceeding? What  
6     value do you think that residential customer in that  
7     situation would place on avoiding a power outage?

8           A     It would be very high.

9           Q     So that's just one example, but with a  
10    significant portion of today's workforce continuing to  
11    work from home and perhaps continuing to work from home  
12    even beyond COVID-19, is it fair to say that a  
13    significant amount of commerce and business is being  
14    conducted from home?

15          A     You know, anecdotally, I think that's certainly  
16    true. I don't have any documents -- oh, dear -- to -- my  
17    computer is threatening to do something -- I'm sorry.  
18    You know, I don't have any data to back that up -- I need  
19    to snooze it, I think -- I think I'm okay -- sorry, sorry  
20    -- to, you know, say specifically, but I think that's  
21    certainly a whole different paradigm than it was a year  
22    ago.

23          Q     And so I think you've sort of made my point and  
24    jumped to my conclusion here before I had a chance to do

1     so, so thank you for that. But it's correct, is it not,  
2     that no studies have been conducted yet to revalue the  
3     customer interruption cost in today's COVID-19 era with a  
4     significant portion of the workforce working from home?

5           A     That is true. I'm not even sure when those  
6     estimates were made. I heard some discussion of it in  
7     talking with Mr. Oliver, but they are very much broad  
8     estimates and they were pre-pandemic.

9           Q     Okay. Thank you.

10           MS. CRESS: That's all I have.

11           CHAIR MITCHELL: Any additional questions from  
12     Intervenors on Commissioners' questions?

13                     (No response.)

14           CHAIR MITCHELL: Questions from Duke?

15           MS. JAGANNATHAN: Thanks, Chair Mitchell. I  
16     just have a couple of quick questions.

17     EXAMINATION BY MS. JAGANNATHAN:

18           Q     Mr. Huber, you were discussing the anticipated  
19     timeline for the comprehensive rate review with  
20     Commissioner Hughes, and I was wondering if you could  
21     just let us know, kind of, how the implementation of  
22     Customer Connect fits into that timeline. I believe in  
23     your rebuttal testimony you say it's scheduled to be  
24     implemented in Duke Energy Carolinas in spring 2021; is



1     that right?

2           A     (Huber) That's correct, yeah. And I think in  
3     general, though, what we want to do is get all of our  
4     ducks in a row in preparation for Customer Connect being  
5     stabilized and ready, you know, to handle new rate  
6     designs, of course. And, again, that's, you know, part  
7     of the reason why we want to get started, you know,  
8     sooner -- sooner than later on this comprehensive rate  
9     review. So in general, you know, we have that -- I have  
10    that target in mind, though, of, you know, Customer  
11    Connect has to come in, it has to be stabilized, and  
12    then, you know, depending on what the rate design is,  
13    we're off to the races and we can get -- hopefully get  
14    something implemented right away.

15          Q     Okay. Thank you. And Ms. Hager, just one last  
16    question for you. I heard you bring up the pie again in  
17    response to Commissioner McKissick, and I just wanted to  
18    ask you, would you say that as long as all of its costs  
19    are recovered, the Company is essentially agnostic as to  
20    how the pie is sliced when it comes to cost allocation?

21          A     (Hager) That's true.

22          Q     So would it be fair to say the Company's  
23    primary motivation in proposing cost allocation  
24    methodologies is to allocate cost in a fair and equitable

1 manner, according to longstanding cost allocation  
2 principles?

3 A Yes. I would totally agree with that. And one  
4 of the things I had wished I had mentioned earlier was  
5 there's been some discussion about Dr. Bonbright and his  
6 book and sort of what he has to say about things. And he  
7 does -- waxes poetic somewhat about minimum system, if  
8 that's possible, but he does ultimately conclude that if  
9 you've got to do something with minimum system, he thinks  
10 it is more appropriate as a customer cost as opposed to  
11 remaining as a demand related cost. But, yes, you know,  
12 I think all things being equal, the customer -- I mean,  
13 the Company is just trying to do what it believes is fair  
14 and equitable and treats essentially all electrons  
15 equally.

16 Q Thank you.

17 MS. JAGANNATHAN: That's all I have.

18 CHAIR MITCHELL: All right. At this point I  
19 believe your witnesses may step down. Thank you all for  
20 the testimony today. And I will entertain motions.

21 MS. DOWNEY: Madam Chair, Diana Downey.

22 CHAIR MITCHELL: Yes, ma'am, Ms. Downey.

23 MS. DOWNEY: Chair Mitchell, I would move that

24 Public Staff Pirro/Hager Cross Examination Exhibits 1

1 through 5 be entered into the record and into evidence.

2 CHAIR MITCHELL: All right. Ms. Downey,  
3 hearing no objection to your motion, it is allowed.

4 (Whereupon, Public Staff Pirro/Hager  
5 Cross Examination Exhibits 1 through  
6 5 were admitted into evidence.)

7 MR. NEAL: Chair Mitchell, this is David Neal.

8 CHAIR MITCHELL: You may proceed, Mr. Neal.

9 MR. NEAL: I would also move into evidence NC  
10 Justice Center, et al. Hager/Pirro -- or maybe it was  
11 Pirro/Hager Cross Exhibit Number 1.

12 CHAIR MITCHELL: All right, Mr. Neal. Hearing  
13 no objection to your motion, it is allowed.

14 (Whereupon, NC Justice Center, et al.  
15 Pirro/Hager Cross Examination Exhibit  
16 Number 1 was admitted into evidence.)

17 MS. JAGANNATHAN: All right, Chair Mitchell,  
18 Molly Jagannathan. I would move that Pirro Exhibits 1  
19 through 9 and Pirro Second Settlement Exhibits 4 and 9 be  
20 admitted into evidence, as well as Hager DEC Redirect  
21 Exhibit 1.

22 CHAIR MITCHELL: All right, Ms. Jagannathan,  
23 hearing no objections to your motion, it is allowed.

24 (Whereupon, Pirro Exhibits 1 through

1 9, Pirro Second Settlement Exhibits  
2 4 and 9, and Hager DEC Redirect  
3 Examination Exhibit Number 1 were  
4 admitted into evidence.)

5 MS. JAGANNATHAN: And I would also move that  
6 Ms. Hager, Mr. Huber, and Mr. Pirro be excused.

7 CHAIR MITCHELL: Your witnesses may be excused.

8 MS. JAGANNATHAN: Thank you, Chair Mitchell.

9 CHAIR MITCHELL: All right. And we will -- we  
10 are still with Duke. Do you all need a brief recess to  
11 change out your witnesses?

12 MR. ROBINSON: Yes, Chair Mitchell. That would  
13 be nice. Thank you.

14 CHAIR MITCHELL: Okay.

15 MR. SOMERS: Chair Mitchell, if I may, this is  
16 Bo Somers. I have a procedural update that might take  
17 some of that time --

18 CHAIR MITCHELL: Okay.

19 MR. SOMERS: -- if that's okay.

20 CHAIR MITCHELL: You may proceed.

21 MR. SOMERS: Thank you. We had discussed at  
22 the beginning of the hearing today about the plan for  
23 this panel, including Mr. Schneider, and Mr. Moore on  
24 behalf of the Justice Center group of Intervenors that

1     expressed that they had cross for him. Subsequent to  
2     that conversation, Mr. Moore has informed me that he's  
3     decided he does not have cross for Mr. Schneider. I'll  
4     let him confirm that, certainly, on the record, but  
5     that's my understanding. Based upon that, I just wanted  
6     to ask and make sure it's clear if there are any other  
7     parties that have cross; if not, I would -- and if the  
8     Commission doesn't have questions, I would renew my  
9     earlier motion to excuse Mr. Schneider.

10           CHAIR MITCHELL: All right. I will first check  
11     in with Mr. Moore, Mr. Neal. Does the Justice Center, et  
12     al. have any cross examination for the witness?

13           MR. MOORE: Chair Mitchell, no -- no further  
14     questions for the witness. I think -- I'm confident that  
15     Ms. Barnes can answer all our questions.

16           CHAIR MITCHELL: All right. Thank you, Mr.  
17     Moore. All right. And I will check in with my  
18     colleagues. Commissioners, any questions for the  
19     witness? Any objections to allowing Duke's motion?

20                           (No response.)

21           CHAIR MITCHELL: All right. Hearing none, Mr.  
22     Somers, your motion will be allowed. The witness may be  
23     excused.

24           MR. SOMERS: Thank you. And then if I could

1 for the record, Chair Mitchell, just formally move Mr.  
2 Schneider's prefiled direct testimony in the DEC docket  
3 into the record, along with the summary that he prepared  
4 and was circulated to the parties, I believe, yesterday.  
5 I'd also move that into the record, and we will file that  
6 with the Commission by the close of business today.

7 CHAIR MITCHELL: All right. Hearing no  
8 objection to your motion, Mr. Somers, it will be allowed.

9 MR. SOMERS: Thank you.

10 (Whereupon, the prefiled direct  
11 testimony and Summary of Donald L.  
12 Schneider, Jr., was copied into the  
13 record as if given orally from the  
14 stand.)

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**BEFORE THE NORTH CAROLINA UTILITIES COMMISSION****DOCKET NO. E-7, SUB 1214**

In the Matter of:	)	
	)	<b>DIRECT TESTIMONY OF</b>
Application of Duke Energy Carolinas, LLC	)	<b>DONALD L. SCHNEIDER, JR.</b>
For Adjustment of Rates and Charges	)	<b>FOR DUKE ENERGY</b>
Applicable to Electric Service in North	)	<b>CAROLINAS, LLC</b>
Carolina	)	

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**I. INTRODUCTION**

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

A. My name is Donald L. Schneider, Jr., and my business address is 400 South Tryon Street, Charlotte, North Carolina 28202.

**Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

A. I am employed by Duke Energy Business Services, LLC ("DEBS"), as General Manager, Advanced Metering Infrastructure ("AMI") Program Management. DEBS provides various administrative and other services to Duke Energy Carolinas, LLC ("DE Carolinas" or the "Company") and other affiliated companies of Duke Energy Corporation ("Duke Energy").

**Q. PLEASE BRIEFLY DESCRIBE YOUR DUTIES AS GENERAL MANAGER, AMI PROGRAM MANAGEMENT, FOR DUKE ENERGY.**

A. My duties and responsibilities include managing the project execution of all AMI related projects for all Duke Energy jurisdictions, including DE Carolinas. I am also responsible for reporting and mapping related to AMI, as well as system integrations and upgrades involved in the control of AMI communication networks.

**Q. PLEASE SUMMARIZE YOUR EDUCATION AND PROFESSIONAL QUALIFICATIONS.**

A. I received a Bachelor of Science Degree in Electrical Engineering from the University of Evansville (Indiana) in 1986. Upon graduation, I was employed by Duke Energy Indiana (then known as Public Service Indiana) as an electrical



1 engineer. Throughout my career with Duke Energy, I have held various  
2 positions of increasing responsibility in the areas of engineering and operations,  
3 including distribution planning, distribution design, field operations, and capital  
4 budgets. In 2006, I was named General Manager, Midwest Premise Services,  
5 responsible for managing all of Duke Energy's Midwest premise service and  
6 meter reading departments. Following this, in 2008, prior to the Duke  
7 Energy/Progress Energy merger, I was promoted to a position responsible for  
8 managing the project execution for all Grid Modernization projects, including  
9 both AMI and Distribution Automation ("DA"), for all legacy Duke Energy  
10 jurisdictions. In 2012, following the Duke Energy/Progress Energy merger, I  
11 was named to my current position. Additionally, I have been registered as a  
12 professional engineer with the State Board of Registration for Professional  
13 Engineers in the state of Indiana since 1995.

14 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION**  
15 **OR ANY OTHER REGULATORY BODIES?**

16 A. Yes. I have testified before this Commission in connection with DE Carolinas'  
17 general rate case proceeding in Docket No. E-7, Sub 1146. I also submitted  
18 testimony on behalf of Duke Energy Progress, LLC's ("DE Progress") general  
19 rate case proceeding in Docket No. E-2, Sub 1142. I have testified for: DE  
20 Carolinas and DE Progress before the Public Service Commission of South  
21 Carolina; Duke Energy Ohio before the Public Utilities Commission of Ohio;  
22 Duke Energy Kentucky before the Kentucky Public Service Commission; and

1 Duke Energy Indiana before the Indiana Utility Regulatory Commission in  
2 cases related to AMI and smart grid topics.

3 **II. SUMMARY OF TESTIMONY**

4 **Q. PLEASE SUMMARIZE YOUR TESTIMONY.**

5 A. In my testimony, I describe the Company's implementation of AMI technology  
6 in the DE Carolinas North Carolina service territory, discuss the option  
7 available for customers who do not want a smart meter, and highlight the costs  
8 included in this case. I describe the customer facing benefits of the AMI  
9 program that deliver customers with greater convenience, control and  
10 transparency.

11 **III. AMI IMPLEMENTATION**

12 **Q. WHAT IS AMI?**

13 A. AMI refers to a comprehensive metering solution – including meters,  
14 communication devices, communication networks, and back office systems –  
15 used to create two-way communications between customer meters and the  
16 utility. AMI meters - often referred to as “smart meters” - are digital electricity  
17 meters that have advanced features and capabilities beyond traditional  
18 electricity meters. Some of the advanced features include the capability for  
19 two-way communications, interval usage measurement, tamper detection,  
20 voltage and reactive power measurement, net metering capability, and an  
21 internal remotely operable disconnect switch. The system utilizes a radio  
22 frequency (“RF”) mesh architecture, which is flexible in that the meters within

1 the mesh network establish an optimized RF communication path to a collection  
2 point either through other meters or, in some cases, through network range  
3 extenders.

4 **Q. DESCRIBE THE STATUS OF IMPLEMENTATION OF AMI ACROSS**  
5 **THE DE CAROLINAS SYSTEM.**

6 A. Between the Company's last rate case and June 30, 2019, DE Carolinas  
7 installed about one million smart meters in its North Carolina service territory.  
8 As of June 30, 2019, the Company has approximately two million smart meters  
9 installed in its North Carolina service territory and deployment is almost  
10 complete.

11 **Q. IS THERE AN ALTERNATIVE SOLUTION FOR CUSTOMERS WHO**  
12 **DO NOT WISH TO HAVE A SMART METER?**

13 A. Yes. The Commission approved Rider MRM, Manually Read Meter Rider, on  
14 June 22, 2018<sup>1</sup> (hereinafter the "Opt-Out Program"), which addresses the  
15 customers who have objected to the installation of a smart meter. The Company  
16 began enrolling customers in the opt-out program in October 2018, after the  
17 completion of necessary IT system changes. DE Carolinas has enrolled 1,627  
18 customers in the opt-out program through the end of June 2019.

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<sup>1</sup> *Order Approving Manually Read Meter Rider with Modifications and Requesting Additional Information*, Docket No. E-7, Sub 1115 (June 22, 2018).

1 **Q. ARE COSTS FOR THE AMI IMPLEMENTATION INCLUDED IN THIS**  
2 **RATE CASE?**

3 A. Yes. Costs of the smart meter implementation are included in this rate case.  
4 From January 1, 2018 through June 30, 2019, the Company invested \$118.4  
5 million across the system in North and South Carolina. From July 1, 2019  
6 through the project end date of December 31, 2019, the Company is projected  
7 to invest an additional \$9.6 million across the system.

8 **IV. AMI DIRECTLY PROVIDED AND ENABLED CUSTOMER**  
9 **BENEFITS**

10 **Q. DOES THE IMPLEMENTATION OF AMI DELIVER BENEFITS TO**  
11 **THE COMPANY'S CUSTOMERS?**

12 A. Yes. The AMI technology is customer-focused; it directly provides and enables  
13 greater convenience, control and transparency over a customer's energy  
14 consumption.

15 **Q. HOW DOES AMI DELIVER THE BENEFIT OF CONVENIENCE TO**  
16 **CUSTOMERS?**

17 A. With remote disconnect/reconnect capability, AMI technology directly provides  
18 customers the convenience of not needing to schedule a technician to visit their  
19 premise when they request their electric service be connected or disconnected.  
20 Likewise, customers who are disconnected for non-payment will have power  
21 restored more quickly through the remote reconnect capability than they would  
22 if DE Carolinas had to send a technician on site. Additionally, customers benefit  
23 from the greater convenience provided by the capability for DE Carolinas to

1 perform regular and off-cycle meter reads remotely, avoiding customer  
2 appointments in some cases.

3 The AMI technology also enables customer convenience through Pick  
4 Your Due Date. This optional program allows eligible customers to select their  
5 desired billing due date as any date from the 1<sup>st</sup> to the 31<sup>st</sup> of the month, better  
6 aligning customers' needs and giving them the convenience to choose the day  
7 of the month they want to pay their bill. Through the end of June 2019, more  
8 than 18,000 DE Carolinas customers have enrolled in the Pick Your Due Date  
9 program.

10 **Q. ARE THERE BENEFITS DELIVERED BY AMI THAT GIVE**  
11 **CUSTOMERS MORE CONTROL OVER THEIR ENERGY USAGE?**

12 A. Yes. Usage Alerts is another program enabled by the AMI technology. The  
13 Usage Alerts program provides eligible customers with an alert at the midpoint  
14 of their billing cycle showing their accumulated charges and a forecast of their  
15 month-end bill. Through Usage Alerts, customers can customize their  
16 experience by choosing to receive threshold alerts that notify them when their  
17 charges are approaching/exceeding their monthly budget. Customers have the  
18 option to further set and change their alert preferences in the usage alert  
19 management tool and set a budgeted dollar amount and change their alert  
20 channel to text message. There are currently more than 1.4 million customers  
21 in DE Carolinas enrolled in Usage Alerts, out of the approximate two million  
22 customers that have an AMI meter installed.

1   **Q.   HOW DOES AMI DELIVER THE BENEFIT OF INCREASED**  
2       **TRANSPARENCY AND COMMUNICATION WITH CUSTOMERS?**

3   A.   The AMI technology directly provides customers with access to view and  
4       download detailed information about their hourly and daily usage patterns  
5       through the Duke Energy customer portal, allowing them to closely monitor  
6       their usage so they can make more informed choices regarding how they use  
7       energy, and potentially change their energy usage behaviors to help reduce  
8       energy costs.

9               Similarly, Duke Energy has developed a new program for customers to  
10       download their usage data in a format consistent with the Green Button  
11       “Download My Data” standard. This program, that Duke Energy plans to  
12       deliver by the end of 2019, has advantages over other formats as it will allow  
13       customers to download usage data in the format consistent with Green Button  
14       standards, thus making it compatible with many third parties with whom a  
15       customer may choose to share their data. As a Duke Energy-developed  
16       solution, it also has security advantages over a third-party product. On  
17       September 5, 2019, the Commission approved the Company’s joint application  
18       with DE Progress for approval of a smart meter usage application pilot in  
19       Docket Nos. E-7, Sub 1209 and E-2, Sub 1213 that will provide customers  
20       access to real-time energy usage on their smart device.

1 Finally, AMI is being integrated into the Company's efforts to increase  
2 communications with customers about outages and restoration timelines after a  
3 storm.

4 **Q. YOU MENTIONED THE COMPANY IS UTILIZING AMI DURING**  
5 **STORM OUTAGES AND RESTORATION. HOW SO?**

6 A. DE Carolinas has the capability to interrogate individual smart meters to  
7 determine if customers have power. During the damage assessment phase of a  
8 storm, mass meter interrogation capability allows the Company to have a better  
9 view of where outages are located on the system. This functionality helps  
10 reduce the assessment time, thus reducing outage durations for customers.

11 During the power restoration phase of a storm, the capability of mass  
12 meter interrogation enables the Company to determine whether power has been  
13 restored to each meter before leaving an area.

14 Lastly, during the cleanup phase of a storm, the capability of  
15 interrogating individual meters can tell the Company when a customer's power  
16 has already been restored, saving a truck roll to confirm power has been  
17 restored.

18 During Hurricane Florence in September 2018, the Company  
19 successfully interrogated 1,663 meters and avoided the need to send trucks to  
20 determine whether power had been restored to those locations. During  
21 Hurricane Michael in October 2018, the Company successfully interrogated

1 3,881 meters and during Winter Storm Diego in December 2018, the company  
2 successfully interrogated 2,986 meters.

3 **Q. IS THE COMPANY OFFERING DYNAMIC OR TIME OF USE**  
4 **PRICING OPTIONS ENABLED BY AMI?**

5 A. Yes. With the capability to record interval usage data, the AMI technology is a  
6 foundational solution that enables new rate designs, and DE Carolinas is  
7 offering several pilot programs as described in Witness Pirro's testimony. The  
8 additional data from smart meters, combined with the new Customer  
9 Information System referenced in Witness Henning's testimony, will continue  
10 to provide the Company with expanded options and flexibility in supporting  
11 enhanced services and rate offerings.

12 **Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?**

13 A. Yes.



**Duke Energy Carolinas, LLC**  
**Summary of Direct Testimony of Donald L. Schneider, Jr.**  
**Docket No. E-7, Sub 1214**

The purpose of my direct testimony is to describe the Company's implementation of AMI technology in the DE Carolinas North Carolina service territory, including the customer facing benefits of the AMI program.

An AMI system is a comprehensive metering solution used to create two-way communications, interval usage measurement, tamper detection, voltage and reactive power measurement, and net metering capability. Since the Company's last rate case, DE Carolinas has installed over one million smart meters in its North Carolina service territory, and the Company is essentially complete with deployment. For customers who do not wish to have a smart meter installed, DE Carolinas offers an opt-out program.

Today, customers with smart meters have access to detailed information about their hourly and daily usage patterns, which allows them to make more informed choices regarding their energy usage. Customers with smart meters benefit from the convenience of remote meter-reading and remote disconnect and reconnect capabilities, eliminating the need for a technician to come to the customer's premise. During storm outages, damage assessment and repair verification can be done much more quickly when customers have a smart meter.

With AMI implementation, the Company is able to offer greater convenience, control and transparency over a customer's energy consumption. Pick Your Due Date allows customers to select a billing due date that best aligns with their needs, and Usage Alerts provides alerts during the billing cycle that show charges to-date and forecasts the month-end bill. Customers are notified that these programs are available to them once their meter is installed and ready for billing. Finally, as discussed by Witness Hatcher, AMI is a foundational investment that enables new rate designs, services, and product offering.

This concludes the summary of my Direct Testimony.

1                   CHAIR MITCHELL: All right. And I -- Mr.  
2 Robinson is no longer -- Mr. Robinson, do you all need  
3 additional time to get your witnesses prepared?

4                   MR. ROBINSON: Chair Mitchell, just one more  
5 minute. We're getting everything situated now.

6                   CHAIR MITCHELL: All right. Why don't we take  
7 a five-minute recess, and then we will come back on at  
8 11:50.

9                   (Recess taken from 11:44 a.m. to 11:50 a.m.)

10                  CHAIR MITCHELL: All right. Let's go back on  
11 the record, please. Duke, you may call your witness.

12                  MR. SOMERS: Thank you, Chair Mitchell. Again,  
13 I appreciate the Commission's understanding. We're  
14 trying to move folks around and be safe and efficient as  
15 we can, so we appreciate your understanding.

16                  If I could, we would call Ms. Conitsha Barnes  
17 to the stand.

18                  CHAIR MITCHELL: All right, Ms. Barnes. Let's  
19 see, I don't see you on my screen. Oh, there you are.  
20 Can you raise your right hand please, ma'am? Let's get  
21 you under oath.

22 CONITSHA B. BARNES;           Having been duly affirmed,  
23                                   Testified as follows:

24 DIRECT EXAMINATION BY MR. SOMERS:

1           Q     Good morning, Ms. Barnes. I was checking to  
2     see what time it was. We're still in morning. Good  
3     morning. How are you today?

4           A     I'm doing well. Good morning, Mr. Somers.

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

7           A     My name is Conitsha Barnes.

8           Q     And would you remind us what your position is  
9     with Duke Energy, please?

10          A     Yes. I am Regulatory Affairs Manager for Duke  
11     Energy Carolinas.

12          Q     And what is your business address?

13          A     My business address is 550 North Tryon Street,  
14     Charlotte, North Carolina.

15          Q     And you've testified previously in the  
16     consolidated phase. For purposes of today's testimony,  
17     you're here to testify on behalf of Duke Energy  
18     Carolinas' Prepaid Advantage Program and its application;  
19     is that correct?

20          A     That is correct.

21          Q     All right. And have you prepared a summary of  
22     your Prepaid testimony?

23          A     I have.

24                   MR. SOMERS: Chair Mitchell, at this time I

1 would ask that Ms. Barnes' summary of her DEC-specific  
2 testimony be copied into the record.

3 CHAIR MITCHELL: All right, Mr. Somers.

4 Hearing no objection to your motion, it's allowed.

5 (Whereupon, the Summary of the  
6 testimony of Conitsha B. Barnes  
7 was copied into the record as if  
8 given orally from the stand.)

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**Duke Energy Carolinas, LLC**  
**Summary of Direct Testimony of Conitsha Barnes**  
**Docket No. E-7, Sub 1214**  
**Docket No. E-7, Sub 1213**

The portion of my rebuttal testimony related to Duke Energy Carolinas' request for approval of the Prepaid Advantage Program responds to portions of the direct testimony of Public Staff witness Jack Floyd and portions of the direct testimony of North Carolina Justice Center, North Carolina Housing Coalition, Natural Resource Defense Council, and Southern Alliance for Clean Energy witness John Howat. A portion of my rebuttal testimony also responds to portions of Witness Howat's direct testimony regarding the number of disconnections for nonpayment in January 2016 and January 2020.

Duke Energy Carolinas is committed to working with our customers to avoid disconnections for nonpayment and utilizes this option only as a last resort after a number of notifications to customers - - including information about payment arrangement options. Each month the Company reports the total number of disconnections for nonpayment filed monthly in Docket No. M-100 Sub 61A. In his direct testimony, Witness Howat testifies that the number of disconnections for nonpayment more than doubled from 4,948 in January 2016 to 11,276 in January 2020. Witness Howat does not acknowledge, however, that differences in the gross number of monthly disconnections compared year to year can also be explained by variable factors such as extreme weather that can impact the suspension of disconnects for nonpayment. In fact, due to extremely cold weather, the Company suspended disconnections for nonpayment for 13 days in January 2016, whereas there were only 3 such days in January 2020.

**Duke Energy Carolinas, LLC**  
**Summary of Direct Testimony of Conitsha Barnes**  
**Docket No. E-7, Sub 1214**  
**Docket No. E-7, Sub 1213**

My testimony also supports the Company's Prepaid Advantage program. By utilizing the benefits of smart meters, Prepaid Advantage offers customers the voluntary bill option to prepay for service, thereby avoiding the need for a deposit, reconnect fees, or late fees, and other customer benefits. Prepaid Advantage is similar to an existing prepaid advantage program in our South Carolina service territory and has successfully delivered increased customer satisfaction and energy savings. Prepaid Advantage offers an option for customers who are seeking another billing or budget option, and is well received by our customers, including low income and fixed income customers.

In his direct testimony on behalf of the Public Staff, Witness Floyd recommends approval of the Prepaid Advantage program, with certain conditions. The Company agrees with the Public Staff's recommendations. Witness Floyd details the Public Staff's review of several studies that strongly suggest voluntary payment utility service options are well received and preferred by all types of customers. Witness Howat, however, claims that the Company's proposed Prepaid Advantage Program is punitive for low-income customers and requires customers to forfeit key consumer protections. I disagree with Mr. Howat because (1) Prepaid Advantage is a voluntary program and is not limited to low-income customers; (2) avoiding deposits and allowing customers to make payments in advance, on a schedule and in an amount they choose, is advantageous for some low-income or fixed-income customers; (3) our experience in South Carolina demonstrates that the program is well received by all customers, and is beneficial to low-income and fixed-income

**Duke Energy Carolinas, LLC**  
**Summary of Direct Testimony of Conitsha Barnes**  
**Docket No. E-7, Sub 1214**  
**Docket No. E-7, Sub 1213**

customers; and (4) the program design allows customers to receive notifications via digital channels 5 days, 3 days and 1 day in advance of disconnection for non-payments.. Furthermore, on average, customers in our South Carolina Prepaid Advantage program reduced their energy use approximately 8.5%. As Public Staff Witness Floyd testified, the program design doesn't forfeit consumer protections, but allows the Company to offer the protections in a different manner. Accordingly, I ask that the Commission approve the Company's Prepaid Advantage program.

This concludes the summary of my rebuttal testimony related to the Prepaid Advantage Program and disconnections for non-payment.

1                   MR. SOMERS: Given that her testimony was  
2 already admitted previously, she is available for any  
3 cross questions.

4                   CHAIR MITCHELL: All right. Cross examination  
5 for the witness? Mr. Moore, I believe, you are the only  
6 attorney I have indicated in my notes.

7                   MR. MOORE: Thank you, Chair Mitchell.

8 CROSS EXAMINATION BY MR. MOORE:

9           Q       Good morning. Yes, still morning. Good  
10 morning, Ms. Barnes. My name is Tirrill Moore. I'm  
11 representing the North Carolina Justice Center, North  
12 Carolina Housing Coalition, Natural Resources Defense  
13 Council, and the Southern Alliance for Clean Energy.  
14 Actually, I have a few questions for you this morning  
15 about the Prepaid Advantage program. In the Company's  
16 Petition for Approval of the Prepaid Advantage Program  
17 filed in Docket E-7, Sub 1213, the Company stated that  
18 there would be no late payment fees assessed under the  
19 program; is that right?

20           A       That is correct, Mr. Moore.

21           Q       Instead, once a customer's balance reaches  
22 zero, the customer has one business day before their  
23 electricity service is disconnected; is that right?

24           A       That is correct, pending the customer does not



1 make a payment.

2 Q In the Company's Petition for Approval, on the  
3 top of page 4 it states that customers will be able to  
4 begin service with a low up front cost by avoiding a  
5 traditional deposit if one would otherwise be required;  
6 is that correct?

7 A I'm turning to page 4 of the Application. Just  
8 a second.

9 Q Sure.

10 A Yes. That is correct.

11 Q Would you agree that low-income customers who  
12 might otherwise not have cash on hand for a traditional  
13 deposit would possibly have little choice but to enroll  
14 in the Prepaid program?

15 A I would say that the Prepaid program is an  
16 option for all customers, including low-income customers.  
17 I just would remind -- remind you that in addition to not  
18 paying a deposit, the customer can also get a guarantor.  
19 So Prepaid is just another option, but not the only  
20 option in lieu of paying a deposit.

21 Q Have you read Mr. John Howat's direct  
22 testimony?

23 A Yes, I have.

24 Q In his testimony he summarizes some of the data

1 requests that the Company produced. On page 6 of his  
2 testimony there's a quote from Mr. Howat that says "In  
3 the most recent 12 months, 26 percent of all DEC  
4 residential customers were charged a late payment fee  
5 each month." Does that sound correct?

6 A So what I would say is that that does sound  
7 correct to what witness Howat has there. I think witness  
8 Howat says that his assumption is that they're the same  
9 customers, but the percentage, I would agree, is  
10 accurate.

11 Q Okay. So using Mr. Howat's numbers, if all of  
12 DEC's customers were enrolled under the Prepaid Advantage  
13 program, in the past year 26 percent of all DEC customers  
14 would have either been disconnected from service or  
15 within one business day of being disconnected from  
16 electric service; is that right?

17 A That's incorrect. So I think -- let me just  
18 take some time just to explain the information that you  
19 have. What that is showing is that -- what percentage of  
20 customers received a late payment fee. So we issue a  
21 customer's bill, and then after 25 days of that bill not  
22 being paid by the due date, or 25 days from the bill  
23 date, excuse me, the customer is assessed a late payment  
24 charge. That late payment charge does not reflect a

1     disconnection for nonpayment.

2                 So there's additional process or work along the  
3     delinquency process. So they're assessed a late payment  
4     charge. Once they're assessed a late payment charge,  
5     then at that point they could also be -- receive a 10-day  
6     notice, per Commission rules, and then in addition to  
7     that, they would also potentially, if they have not made  
8     a payment, they would receive a 24-hour notice.

9                 So I think what I'd like to just maybe clarify,  
10    the late payment fee -- the percentage that Mr. -- excuse  
11    me -- witness Howat has quoted is not reflective of the  
12    customers just being disconnected for nonpayment. The  
13    actual number of -- percentage wise of customers that  
14    were disconnected for nonpayment in that same 12-month  
15    time frame is .63 percent, so a little over -- less than  
16    -- a little over half of a percent of our total  
17    customers. So I guess it's just a significantly  
18    different number in comparison to the late payment  
19    charge. And I think the other thing that that shows is  
20    that we have customers who, yeah, are assessed a late  
21    payment charge, but a significant number of those  
22    customers actually make payment and avoid non-pay  
23    disconnect.

24                Q     I guess I was unclear with my question. I was

1 not stating that the 26 percent was representative of  
2 customers that have been disconnected; it's customers  
3 that have been assessed a late fee -- a late fee that  
4 would not be assessed under the Prepaid Advantage  
5 program, correct?

6 A That is correct.

7 Q In its Application, the Company has also  
8 requested waiver of several of the rules that you just  
9 mentioned; isn't that correct?

10 A That is correct.

11 Q For example, the Company has requested waiver  
12 of Commission Rule R8-8 which requires that monthly bills  
13 be provided?

14 A That is correct.

15 Q And it's also -- you have also asked for a  
16 waiver of Commission Rule R12-8 which requires five days  
17 written notice before discontinuance of service for  
18 nonpayment; is that correct?

19 A That is correct.

20 Q And you've also asked for waiver of Commission  
21 Rule R12-9(c) which defines the delinquent date as not  
22 less than 15 days after the billing date; is that  
23 correct?

24 A That is correct.

1           Q     And you've also asked for waiver of Commission  
2     Rule R12-11(h) which requires supervisor provision or  
3     supervisor review prior to disconnection of electricity  
4     service; is that correct?

5           A     That is correct.

6           Q     And you have asked for waiver of Commission  
7     Rule R12-11(m)(1) which requires the Commission -- or the  
8     Company to attempt to contact a customer either by  
9     telephone or in person prior to disconnection; is that  
10    correct?

11          A     That is correct.

12          Q     Ms. Barnes, would you agree with me that the  
13    Commission established these rules for a reason?

14          A     Yes, but I guess if you let me elaborate, too,  
15    I do agree that they established the rules for a reason.  
16    I also would say that they established the rules at a  
17    time where the only way that our customers were billed  
18    were a monthly bill. These were -- this was, of course,  
19    prior to smart meters and companies such as Duke Energy  
20    Carolinas being able to offer a program that provides  
21    customers these -- the options and the flexibility that  
22    Prepaid provides.

23                The other thing I would share is that there are  
24    waivers to these rules, but I think that in our

1 Application, and I'll be glad to touch on it here, is  
2 that this isn't a waiver of the rule about any type of  
3 communication with -- to the customer. What we've said  
4 is that in our Application, that with prepay, instead of  
5 a customer receiving a traditional bill in the mail that  
6 reflects 30 days of usage or approximately a billing  
7 cycle, that customer has agreed voluntarily to enroll in  
8 a program where they want to pay for their service in  
9 advance. As I mentioned, it's a voluntary program. I  
10 think the other thing I'd share is the waiver of the  
11 rules are -- they're not absent any type of  
12 communication. Customers are agreeing to receive  
13 communications via email or text and, to me, what we've  
14 seen are more timely communications than potentially  
15 waiting on the post office to deliver the bill.

16 Q So you would agree that under the program, the  
17 types and timing of the communication will be different?

18 A Yes. Yes. I would agree that the type of --  
19 the way we communicate with the customers via -- in  
20 comparison to mailing a traditional bill is different.  
21 Customers receive more communications, actually, when  
22 they're on Prepaid than getting a traditional bill, and  
23 those communications are sent via email and text.

24 Q But they will receive less traditional mail

1     communications?

2           A     They will not have to depend on the US postal  
3     system to receive their bill.

4           Q     And they will not have someone attempt to  
5     contact them in person prior to disconnection?

6           A     They won't, but I guess the other thing I would  
7     share with you, Mr. Moore, is that even customers who are  
8     on traditional bill, they may not have someone visit them  
9     in person. We do have -- there is a Commission rule --  
10    like you said, these rules were made with -- for a good  
11    purpose. There is a Commission rule that requires on the  
12    day of disconnect that there is a personal notification  
13    or a personal -- someone visits the location, but with  
14    customers with smart meters, we have handled this in  
15    another docket where we've gotten a waiver that if we are  
16    able to successfully communicate with those customers,  
17    meaning on the day of disconnect, via text or email, that  
18    -- and the communication is successful, we are no longer  
19    rolling a truck where those customers will receive a  
20    personal notification. So I just want to clarify that  
21    this isn't different for prepay. This right here, for  
22    that rule specifically, this is for all customers who  
23    have a smart meter that may have -- get to the point  
24    where their account is subject for non-pay disconnect.

1           I think the other thing I would share is that  
2   most of these rules that you are mentioning are not just  
3   specific to Duke Energy Carolinas. We have -- New River  
4   Power & Light has a very similar prepay program that this  
5   Commission approved that has almost exactly each one of  
6   these waiver requests approved as part of that offering  
7   to their customers.

8           Q     I've just got a few more questions for you. In  
9   order to participate in the Prepaid Advantage program,  
10  all customers are required to have a smart meter  
11  installed; is that right?

12          A     That is correct. The installation of a smart  
13  meter -- this Prepaid Advantage program is enabled by the  
14  benefits of smart meters.

15          Q     And under this program, all of the customers  
16  enrolled in the Prepaid Advantage program will be offered  
17  real-time usage data; is that right?

18          A     That is correct.

19          Q     And they will receive usage alerts throughout  
20  the month?

21          A     They will receive notifications throughout the  
22  month as it relates to when their balance reaches a  
23  threshold five, three days, and one day, but in addition  
24  to just having the smart meter, they do receive usage



1     alerts, just like similar to other customers who are --  
2     have a smart meter.

3           Q     In your rebuttal testimony on page 4, you state  
4     that customers in the South Carolina Prepaid Advantage  
5     program have experienced an eight-and-a-half percent  
6     reduction in energy usage; is that correct?

7           A     I do quote that -- I do quote that in my  
8     testimony, yes.

9           Q     Customers enrolled in DEC's traditional post-  
10    paid rates do not necessarily have access to their data  
11    24/7; is that right?

12          A     That is incorrect. So customers who are on  
13    traditional pay who have a smart meter also have  
14    information available through -- they can log into our My  
15    Account where you can log in and see your usage  
16    information and you can see interval -- interval data --  
17    interval usage information at 30-minute intervals.

18          Q     But not all DEC customers in their traditional  
19    post-paid rates have smart meters installed?

20          A     The majority of customers do. I would say if  
21    there is a customer who has elected to opt out of the  
22    program, meaning that they have elected that they do not  
23    want a smart meter, they don't have access to interval  
24    data because they don't have a smart meter to -- that

1 measures at that level.

2 Q So using the same sort of logic there, not all  
3 DEC customers are entitled to receive notifications  
4 throughout the month based on their usage; is that right?

5 A I would say, Mr. Moore, some customers elect to  
6 not receive a smart meter, and as part of not receiving a  
7 smart meter they do not have the -- we're not using  
8 interval data to communicate with those customers as we  
9 are with customers with a smart meter.

10 Q Do you think it's true that customers on a  
11 traditional billing cycle or billing method may similarly  
12 adjust their usage if they were provided with real-time  
13 usage data?

14 A Mr. Moore, just like I just shared, customers  
15 have usage data via the My Account. They can log in and  
16 they can see that information. I think what I'd like to  
17 delineate between prepay and traditional billed accounts  
18 is prepay customers are getting notices when their dollar  
19 amount threshold -- excuse me -- when their threshold  
20 based on the dollars that they have remaining is five,  
21 three, or one day worth of service left, so that's very  
22 different than they don't have usage information from a  
23 traditional bill account.

24 Q All right. One last line of questions. Would

1     you agree with me that there's a difference between  
2     choosing to adjust your electricity usage based on a  
3     budgeting preference and being forced to make a change to  
4     keep your lights on?

5           A     I do -- would say this -- or I would say, Mr.  
6     Moore, that with information, customers make decisions as  
7     to how they are going to adjust their energy usage. I  
8     think what we've realized is that -- and I think witness  
9     Hatcher shared this, but we have a number of programs  
10    that we're providing information to customers so that  
11    they can control and determine how much energy that they  
12    use. And so I wouldn't say that thrust upon -- you know,  
13    that they were forced to do it. I think what -- they're  
14    making decisions as this is how many days of service I  
15    have left, and with that, may not be just changing how I  
16    use the electricity; it may be the fact that I maybe  
17    said, hey, this is my trigger to go put more dollars on  
18    my account.

19          Q     Would you agree it's important for the Company  
20    to track metrics related to disconnections for nonpayment  
21    for prepayment customers?

22          A     Are you saying reporting how many times they're  
23    disconnected? I don't understand the question.

24          Q     Correct. The number of -- is it important for

1 the Company to track disconnection statistics for the  
2 prepayment program?

3 A We currently track non-pay disconnect  
4 statistics for traditional billed as well, and I don't  
5 think -- I'm not aware that we're planning to do anything  
6 any different with our prepay customers.

7 Q Thank you.

8 MR. MOORE: That's all I have.

9 CHAIR MITCHELL: All right. Any additional  
10 cross examination for the witness?

11 (No response.)

12 CHAIR MITCHELL: All right. Redirect, Mr.  
13 Somers?

14 MR. SOMERS: Yes, Chair Mitchell. I have  
15 several questions. Thank you.

16 REDIRECT EXAMINATION BY MR. SOMERS:

17 Q Ms. Barnes, just to kind of reorient us, the  
18 Company filed this Application for the Prepaid Advantage  
19 program over a year ago, didn't it?

20 A That is correct.

21 Q And since you didn't get to -- I didn't ask you  
22 to read a summary, could you just basically explain what  
23 the Prepaid program is and what its intended to do?

24 A Yes. I'll be glad to. The Prepaid Advantage

1 program allows for customers who would like to  
2 voluntarily sign up to pay for their usage in advance of  
3 using the service. With this right here, they receive  
4 notifications, like I said earlier, when their threshold  
5 reaches an average of so many days left before their  
6 dollars would be depleted. Right now the system  
7 automatically will send notifications at five, three, and  
8 one day. The customer has the option to enroll and  
9 receive more notices.

10 I think what I'd like to share is there is a  
11 \$40 amount minimum to start. That is not a deposit.  
12 That right there is the dollar amount that is saying,  
13 hey, we're going to go ahead and put this in my bucket of  
14 dollars so that I begin to be billed on Prepaid. Signing  
15 up for these programs then eliminates the need for a  
16 deposit because unlike when you pay a deposit due to --  
17 potentially based on a credit review, the credit  
18 potential risk that you're trying to avoid with the  
19 deposit is not necessary because the customer is paying  
20 for that usage in advance of actually using the  
21 electricity.

22 I think the other thing that I'd like to share  
23 is that we have some customers who, if they have an  
24 arrears and they decide, hey, you know, I would like to

1 transition from post-pay to traditional pay, that, too,  
2 is an option. There are some requirements around that.  
3 For example, their total arrears cannot be more than  
4 \$500. I think that would lead to the question of, well,  
5 if they're prepaying, how can they have an arrears?  
6 Well, whenever that arrears is pulled over, it's pulled  
7 over to what I'll call a deferral bucket, and then each  
8 future payment that the customer made is split 75/25,  
9 between 75 percent to 25 percent, of which 25 percent of  
10 each future payment goes towards the amount in the  
11 deferred bucket, and so that amount is paid down  
12 completely. Once that is paid down completely, then each  
13 payment therefore after is 100 percent paid towards the  
14 customer's prepay dollar amount.

15 Q So by waiving the deposit requirement, is that  
16 a benefit to at least some customers who might  
17 voluntarily choose to sign up for this program?

18 A Yes. I think it -- yes, it is. I think that  
19 if for some reason the customer says, hey, I'm moving,  
20 and I want to go ahead and get service turned on, and  
21 potentially, instead of paying a -- I'll just give an  
22 example -- a \$250 deposit, it may be more feasible for me  
23 to pay \$40 to get my service turned on, which would allow  
24 me to begin service as soon as I can, versus if I had to

1 pay a \$250 deposit, I would have to wait until I pay that  
2 \$250 and/or, like I shared with Mr. Moore, that customer  
3 may decide, hey, I can find someone who is a guarantor  
4 that will cosign for me to get my service.

5 Q Do you remember Mr. Moore asked you several  
6 questions about waivers of various notice Commission  
7 rules that the Company had requested any conclusory --  
8 asked you that the Commission had established these rules  
9 for a reason? Do you remember that line of questioning?

10 A I do.

11 Q And does the Commission also have a rule that  
12 requires how deposits are to be established?

13 A They do.

14 Q And is the Company waiving the deposit  
15 requirement for customers who participate, if this  
16 Prepaid Advantage program is approved?

17 A That is correct. If the -- if the customer --  
18 if this program is approved, then the customers who elect  
19 to voluntarily sign up for this program will not be  
20 assessed a deposit.

21 Q I think Mr. Moore also asked you a question  
22 about -- a series of questions about smart meters, and  
23 may have referred to them as AMI -- I'm going to call  
24 them smart meters -- and whether or not DEC customers

1     have smart meters. Do you know approximately what  
2     percentage of customers have chosen to opt out of smart  
3     meters within DEC's service territory?

4           A     I don't know the most recent numbers, but I do  
5     remember early on when we first started the opt out, it  
6     was very few customers had elected to opt out. I think  
7     the numbers were a lot less than what we, I think, maybe  
8     projected originally, is my understanding.

9           Q     And subject to check, would you agree that it's  
10    less than one percent of customers who have opted out of  
11    a smart meter?

12          A     Yes, I would.

13          Q     Thank you. Mr. Moore also asked you about  
14    real-time information, and that's certainly a great  
15    benefit that smart meters are providing for customers.  
16    Would you agree with that?

17          A     I would agree.

18          Q     And I think he asked you a question or two  
19    along the lines that all customers don't have access to  
20    near real-time usage information that a prepaid customer  
21    would have. Do you remember questions like that?

22          A     I do.

23          Q     Has the Company also offered, and this  
24    Commission has approved, a smart meter usage app program



1     that customers can use to get real -- near real-time  
2     usage information as well?

3           A     Yes. The Company has launched a smart meter  
4     usage app program for our customers that allow customers  
5     to go in via an app. Of course, they have to have a  
6     smart phone to see information. That pilot program  
7     actually launched in Q2 of this year -- excuse me -- July  
8     of this year.

9           Q     Thank you. And if you're a Duke Energy  
10    Carolinas customer and you're not on the smart meter  
11    usage app or you don't have access to a prepay program,  
12    certainly not today because it hasn't been approved, but  
13    how can you access your detailed interval energy usage  
14    information that can help you make decisions about how  
15    you, you know, utilize energy in your home or at your  
16    business without having access to that app or Prepaid  
17    Advantage program app?

18          A     Yes. Our customers, similar to all of us  
19    probably with companies you do business with, can go in,  
20    create a personal online profile which allows you to log  
21    in and see information about your account. As part of  
22    that login you can pay your bill, you can see billing  
23    information, billing options, but you can also see your  
24    usage information. So the detailed usage information

1     that Mr. Moore referenced that we're talking about,  
2     customers can log in 24/7 and see that information  
3     online.

4           Q     Thank you. I believe you were present when the  
5     Commission considered this matter back in the fall of  
6     2019 when the Public Staff presented it at Staff  
7     Conference. Do you remember that?

8           A     Yes, I do.

9           Q     All right. And do you recall being asked at  
10    that time how many customers the Company estimated would  
11    participate in the Prepaid Advantage program?

12          A     Yes, I do. The estimate at that time was  
13    approximately maybe 1,000 customers.

14          Q     And so if 1,000 customers choose to take  
15    advantage of this prepay program, it gives them billing  
16    flexibility, it gives them additional avoidance of a  
17    deposit and the other benefits of it, why is the Company  
18    offering it?

19          A     The Company is offering it because we realize  
20    that our customers want options. We're not saying that  
21    100 percent of our customers are going to participate in  
22    this program, but they want options, billing and payment  
23    options. They want options that provide them  
24    convenience, choice, and control. And when looking at

1    what other utilities are doing across the country, along  
2    with, like I said, specifically in our state -- and I  
3    misspoke earlier; I should have said New River Light &  
4    Power -- this is a program that we think would provide  
5    value to our customers. We have the program currently  
6    today in South Carolina, and so this is something that we  
7    think our customers would benefit from and would elect to  
8    voluntarily sign up for.

9           Q     And I think you mentioned this in your prefiled  
10   testimony, but what has been the customer experience for  
11   those South Carolina customers of Duke Energy Carolinas  
12   that have participated in the prepay--- prepay program  
13   in South Carolina?

14          A     I know it can be a mouthful if you say it too  
15   fast. So the experience has been -- what we found is  
16   that customers have been highly satisfied with the  
17   program. I think when witness Hatcher was -- testified  
18   yesterday, he had questions around our surveys that we do  
19   through our customer monitoring -- CX monitoring tool,  
20   and what we found is that customers who have participated  
21   in our prepay program in South Carolina have a higher  
22   satisfactory rate than in comparison to customers who may  
23   not, who have elected not to participate in that program.

24          Q     Thank you. Just a couple more questions. Mr.

1 Moore asked you about your direct testimony where you  
2 testified that in the South Carolina program, customers,  
3 on average, I believe, had saved about 8.5 percent energy  
4 as a result of participating in the Prepaid program. Do  
5 you remember that?

6 A I remember.

7 Q He also asked you a question that I heard, it  
8 was whether there was a difference between choosing to  
9 adjust your energy usage or being forced to reduce it  
10 because your lights are going to get cut off. Do you  
11 remember a question like that?

12 A I do.

13 Q Does the Prepaid Advantage program force  
14 customers to save energy because they're getting  
15 disconnected, or why are they saving energy in South  
16 Carolina today?

17 A I would say, though, the prepay customer does  
18 not -- Prepaid Advantage program does not force customers  
19 to save energy. I think some of what we've learned, even  
20 through our South Carolina earnings report is that  
21 customers are receiving energy tips, energy efficiency  
22 information that has helped them to reduce their energy  
23 usage from that standpoint. I think the other thing that  
24 I'd like to just share is that at any point that the

1 customer is on prepay, if they decide, hey, this doesn't  
2 work for me, they can elect to contact the Company and  
3 transition back to traditional pay. They are not -- this  
4 isn't a contractual agreement where once you get on  
5 prepay that you have to stay on it for any predefined  
6 time frame.

7 Q Thank you. So we discussed earlier this  
8 Application has been pending since August of 2019. As  
9 part of the Company's process to seek approval for this,  
10 did the Public Staff investigate the Company's  
11 Application?

12 A Yes, they did.

13 Q And can you just briefly describe what that  
14 entailed, from the Public Staff's investigation  
15 standpoint?

16 A Yes. Prior to filing the program, and even  
17 after filing the program, we received several data  
18 requests from the Public Staff seeking additional  
19 information to understand how the Company planned to  
20 operate the program. There was a significant number of  
21 dialogue about the program operations and comparison to  
22 understanding the waivers that we were seeking for -- to  
23 enable the program. I think with that, that right there,  
24 that information has also led to, I think what you'll

1 see, details in witness Floyd's testimony, several  
2 recommendations about the program that the Company  
3 supports.

4 Q And does the Public Staff, with those  
5 recommendations, support this program for approval?

6 A Yes. The Public Staff has recommended the  
7 program for approval.

8 Q Okay. So last question, why does the Company  
9 think this is a good idea for its customers?

10 A I'm sorry, Mr. Somers. I could not hear all of  
11 your question.

12 Q Sure. I'm sorry. Last question. Why does the  
13 Company think its program is good for its customers?

14 A We think this program is good for its customers  
15 because, one, it is another opportunity for us to utilize  
16 the benefits of smart meters and give customers a program  
17 that allows them to, like I said, I can't emphasize,  
18 voluntarily decide, hey, is this how I want to pay my  
19 bill? Is this the type of billing and payment  
20 notifications that I want to receive? We have a number  
21 of customers who, like I shared earlier, the \$250 deposit  
22 required today, that until they can make that payment  
23 and/or find a guarantor, they may not be able to move to  
24 a new location. So this program right here makes it more

1 feasible at new customer applications, where customers  
2 potentially can make that payment faster or quicker and  
3 be able to transition into a new -- a new home.

4 I think the other thing that I would share is  
5 that this program right here, I mean, we have -- and some  
6 of it may just, you know, depend, of course, on the  
7 customer, but we have some customers who sharing this  
8 information is what I want. I want more information  
9 sharing, and being able to use this information to decide  
10 when I need to make payments to avoid disconnection based  
11 on how much time I have left is they provide value,  
12 provides them value. And so just like I mentioned  
13 earlier, our customers want choice, convenience, and  
14 control, and we think that this is a program, amongst  
15 others that we have, that provides them that.

16 Q Thank you.

17 MR. SOMERS: That's all the questions I have,  
18 Chair Mitchell.

19 CHAIR MITCHELL: All right. Thank you, Mr.  
20 Somers. Questions from Commissioners, beginning with  
21 Commissioner Brown-Bland?

22 COMMISSIONER BROWN-BLAND: Yes.

23 EXAMINATION BY COMMISSIONER BROWN-BLAND:

24 Q Ms. Barnes, has the Company noticed a segment

1 or group of customers that take advantage of the  
2 prepayment Advantage plan on a temporary basis, for  
3 example -- you brought this to mind -- for example, like  
4 when trying to move in -- move into new apartments, that  
5 kind of thing?

6 A I will tell you this right here, Commissioner  
7 Brown-Bland, that in South Carolina, when we initially  
8 launched the program, we were marketing it to customers  
9 based on geographical area around as we were deploying  
10 smart meters, okay, and so we deploy smart meters to an  
11 area, and we would send out material for -- because those  
12 customers have smart meters. And we had a number of  
13 customers that enrolled in Prepaid Advantage.

14 However, at a later point in time what we  
15 decided to is, in addition to the outbound marketing,  
16 based on zip codes that we know where customers had smart  
17 meters, we updated our billing system that for South  
18 Carolina customers that had a smart meter, we would, at  
19 the time of their application, if a deposit is required,  
20 we would have -- the customer would have the option to  
21 make -- pay the deposit or enroll in prepay. We saw a  
22 big increase in the number of customers that were taking  
23 advantage of that as an option, in lieu of paying a  
24 deposit and also in lieu of getting a guarantor.



1           Q     And so you definitely answered my question in  
2     -- on the one hand, but do you also see that people take  
3     advantage just for -- I mean, have you seen people do it  
4     on a temporary basis, like this will aid me to get in  
5     quickly, but then they try to -- on their own, they seek  
6     to convert? You mentioned it was easy to convert. Have  
7     you seen that, or do people stick with it once they're in  
8     prepay?

9           A     I don't have statistics specifically from the  
10    time somebody enrolls in prepay, what percentage of the  
11    customers who have left prepay and go back to traditional  
12    pay or traditional bill.

13          Q     So it goes to -- I mean, it could be very much  
14    a conscious choice and decision, but it could also be one  
15    of convenience, and I was just trying to see if the  
16    Company had seen that bear out. Also, if -- you hit on  
17    where I was going with my next question. If a customer  
18    prepays for some period of time, a year, two years, 24  
19    months or something less, would that impact the deposit  
20    or guarantee requirement later on, should they want to  
21    switch?

22          A     I think one of the things that we put in our  
23    waiver request is that the customer's payment history on  
24    prepay would not impact their credit code rating if they

1     decided to switch. So if they decided to switch and they  
2     have been -- their service has been interrupted, what  
3     we're doing is really looking -- it's my understanding  
4     that their payment history, if they had traditional bill  
5     pay prior to being billed on prepay, and my understanding  
6     is that if they did not have traditional bill pay,  
7     meaning they came in at application, they had never been  
8     a customer with Duke Energy Carolinas at the time, then  
9     at that point we would do just like we would have done  
10    initially, is we would do a credit check to determine if  
11    a deposit is paid -- I mean, excuse me -- is required.

12           Q     And their record of good payment with Duke, I  
13    guess, would it be just factored in like any other  
14    payments they have with other creditors?

15           A     If we do a third-party credit check, that is  
16    correct.

17           Q     And so there's no special benefit or the  
18    Company doesn't look at, oh, this is a good -- a good  
19    customer who has paid under the prepay plan without any  
20    interruptions and good record for however long, that  
21    wouldn't -- you don't -- you don't know or you don't  
22    think that would factor in?

23           A     That is my understanding, based on current  
24    program design.

1 Q Okay. Thank you.

2 COMMISSIONER BROWN-BLAND: That's all I have.

3 CHAIR MITCHELL: All right. Commissioner Gray?

4 COMMISSIONER GRAY: No questions.

5 CHAIR MITCHELL: Commissioner Clodfelter?

6 COMMISSIONER CLODFELTER: No questions.

7 CHAIR MITCHELL: Commissioner Duffley?

8 COMMISSIONER DUFFLEY: I have just one -- one  
9 or two questions.

10 EXAMINATION BY COMMISSIONER DUFFLEY:

11 Q With respect to the real-time usage data, is  
12 that -- the Application seems to suggest that it's daily  
13 consumption data, but then in the questioning, it sounded  
14 like they -- they will have more real-time consumption  
15 data. Could you just talk a little bit -- provide more  
16 details on exactly what the customer will have with  
17 respect to their own usage data per day?

18 A Yeah. I'll be glad to. So it is interval  
19 level data, Commissioner Duffley, but it is, my  
20 understanding, a 24-hour lag. So 24 hours after the  
21 fact, the customer can log in and then they can see their  
22 interval data in 30-minute intervals.

23 Q Okay. Thank you.

24 COMMISSIONER DUFFLEY: I don't have any further

1 questions.

2 CHAIR MITCHELL: Commissioner Hughes?

3 COMMISSIONER HUGHES: I've just got one  
4 question.

5 EXAMINATION BY COMMISSIONER HUGHES:

6 Q Do you happen to know, Ms. Barnes, if there's a  
7 difference in how Duke deals with or perceives or views a  
8 disconnect under the prepay program in, say, South  
9 Carolina versus a disconnect through a normal channel?  
10 Is it perceived or reported to credit agencies in the  
11 same way? So if somebody gets disconnected four times,  
12 you know, over a period of two months with the prepaid,  
13 but gets disconnected four times over with the normal, is  
14 it viewed the same way by credit -- credit agencies? I  
15 just -- I read that there's more common -- more  
16 disconnects with prepay, but then they can just get  
17 reconnected earlier, and I just didn't know if that would  
18 have an impact on someone's credit, if they follow that  
19 kind of behavior. Does that question make sense? I can  
20 try to clarify it more.

21 A It does, Commissioner Hughes. So let me just  
22 repeat what I believe I heard. I think what I've heard  
23 you ask is how does Duke Energy Carolinas, or even under  
24 the South Carolina program today, report non-pay

1     disconnect to third parties? Do we do it any differently  
2     between traditional or prepaid billed accounts; is that  
3     correct?

4           Q     That's a much better way of asking the  
5     question. Thank you.

6           A     So what I guess I will say is this, we do not  
7     -- for traditional pay nor prepay, we don't report non-  
8     pay disconnect activities to a third-party credit  
9     reporting bureau or credit reporting agency as long as  
10    the customer has active electric service with us, meaning  
11    their account has not final billed out. So what usually  
12    happens is if a customer gets to the point that they're  
13    disconnected for nonpayment, like I said, we wouldn't  
14    report that to a credit bureau. They have a certain  
15    amount of time, and as long as they make payment within  
16    that certain amount of time, we just reconnect that  
17    service and the account stays in active status with the  
18    Company.

19                   However, if a customer is disconnected for  
20    nonpayment and their account -- they don't make a payment  
21    within a certain amount of time, that account final  
22    bills. That final bill process is just the same as if  
23    it's a traditional pay account, where I've moved and  
24    said, hey, Duke Energy Carolinas, I'm moving, I no longer

1     need service with you. Then both of those customers, you  
2     know, you have a final bill. As long as that final bill  
3     is paid within a predefined time frame, Commissioner  
4     Hughes, that information doesn't charge off. If it does  
5     charge off, that is at the point it would be at risk of  
6     being reported to a credit bureau, and that would be the  
7     same for both prepay, along with post-pay, if the prepay  
8     account happened to have some dollars left over remaining  
9     on the account.

10           Q     Thank you, Conitsha.

11                   COMMISSIONER HUGHES: No further questions.

12                   CHAIR MITCHELL: All right. Commissioner  
13     McKissick?

14                   COMMISSIONER MCKISSICK: Just one or two  
15     questions.

16     EXAMINATION BY COMMISSIONER MCKISSICK:

17           Q     Ms. Barnes, how long has the prepay program  
18     been in effect in South Carolina?

19           A     The prepay program in South Carolina,  
20     Commissioner McKissick, launched in July of 2015.

21           Q     Now, is there data that would show how many  
22     people that are on prepay today that were regular  
23     customers of Duke previously and kind of correlate it  
24     between how frequently they got cut off under a

1 traditional payment system as opposed to the frequency  
2 that they may have been disconnected under the prepay  
3 system? I mean, is there -- I'm trying to see if there's  
4 a correlation, to the extent to which there's a  
5 decreasing frequency or if the frequency remains about  
6 the same, or has that type of correlation or analysis  
7 been conducted?

8 A Commissioner McKissick, I am not sure if that  
9 type of analysis has been conducted.

10 Q Okay. It would just be helpful. I mean, I  
11 don't know the extent to which maybe there could be a  
12 late-filed exhibit, but it might give some of that  
13 insight. I mean, I think the frequency of disconnects  
14 under one program versus another, I know it wouldn't be  
15 in North Carolina, but at least it's in a Duke -- you  
16 know, it's in Duke in South Carolina, perhaps that might  
17 be insightful as to whether people are -- I gather  
18 there's a higher level of satisfaction with this program  
19 among people who use it, but I don't know whether there's  
20 a decrease in the number of disconnects.

21 A So let me just make sure, Commissioner  
22 McKissick, excuse me, that I understand what you're  
23 asking. So if there was a customer enrolled in Prepaid  
24 in our South Carolina program today, and that customer at

1     some point was a traditional pay customer, you'd like to  
2     see -- you're asking for a comparison of when they were  
3     traditional pay, over whatever that time frame is, how  
4     many times their account was interrupted involuntarily  
5     versus if they were -- in comparison to prepay billing?

6             Q     That is exactly correct.

7             A     Okay. We'll be glad to look and see if we have  
8     that type of information or -- for the customers who fall  
9     in both of those categories for that comparison.

10            Q     Thank you very much.

11                   COMMISSIONER McKISSICK: No further questions.

12                   CHAIR MITCHELL: Okay. Questions on  
13     Commission's questions? Public Staff? Attorney  
14     General's Office? Any other intervening parties?

15                                 (No response.)

16                   CHAIR MITCHELL: Questions from Duke?

17                   MR. SOMERS: Yes, ma'am. Just two or three. I  
18     apologize. I'll try to be brief.

19                   CHAIR MITCHELL: All right.

20     EXAMINATION BY MR. SOMERS:

21             Q     Ms. Barnes, following up on questions from  
22     Commissioner Hughes and -- certainly, from Commissioner  
23     Hughes and perhaps Commissioner McKissick, you talked  
24     about charge-offs. In the event that a customer doesn't



1 pay their bill and it gets to the point where they're  
2 disconnected and that outstanding balance gets charged  
3 off, who pays -- who pays for that?

4 A All of the ratepayers.

5 Q And -- but not withstanding that and the  
6 protections that the prepay program puts in place to try  
7 to protect not only the customers who are participating  
8 on the program, but all customers as well, does Duke  
9 Energy Carolinas want to disconnect any of its customers?

10 A Absolutely not.

11 Q And last question is why not?

12 A We don't -- I mean, we're in -- we're in the  
13 business of providing customers, you know, a service that  
14 is vital to their livelihood. We don't want to interrupt  
15 a customer's service. And so I think what I'd just like  
16 to share is that giving these customers these options or  
17 choices or programs that allow them to receive bills or  
18 notifications, along with make payments that's best for  
19 them and their lifestyle, is the reason why we're  
20 offering this program.

21 Q Thank you, Ms. Barnes.

22 MR. SOMERS: Chair Mitchell, I don't have any  
23 further questions. Thank you.

24 CHAIR MITCHELL: All right. At this time, I

1 believe, Ms. Barnes you may step down. Thank you for  
2 your testimony this morning -- this afternoon.

3 MS. BARNES: Thank you.

4 CHAIR MITCHELL: All right. Any -- Duke, do  
5 you need a few minutes to arrange your witnesses --

6 MR. ROBINSON: Yes, Chair Mitchell.

7 CHAIR MITCHELL: -- or is Ms. Bednarcik ready  
8 to go?

9 MR. ROBINSON: Yes, Chair Mitchell. Just a few  
10 minutes.

11 CHAIR MITCHELL: Okay. All right. Well, let's  
12 take a five-minute recess here. We'll go back on at  
13 about 12 -- a little after 12:40, 12:41, 12:42.

14 (Recess taken from 12:36 p.m. to 12:42 p.m.)

15 CHAIR MITCHELL: All right, Mr. Robinson. It  
16 looks like your witness is ready.

17 MR. MARZO: Chair Mitchell, actually Brando  
18 Marzo on behalf of Duke Energy Carolinas. We would call  
19 Jessica Bednarcik to the stand.

20 CHAIR MITCHELL: All right, Mr. Marzo. Thank  
21 you. All right, Ms. Bednarcik, let's go ahead and get  
22 you under oath, please, ma'am. Would you raise your  
23 right hand?

24 JESSICA BEDNARCIK; Having been duly affirmed,

1 Testified as follows:

2 CHAIR MITCHELL: Mr. Marzo, you may proceed.

3 MR. MARZO: Thank you, Chair Mitchell.

4 DIRECT EXAMINATION BY MR. MARZO:

5 Q Ms. Bednarcik, would you please state your name  
6 and business address for the record?

7 A My name is Jessica Bednarcik, and my business  
8 address is 400 South Tryon Street, Charlotte, North  
9 Carolina 28202.

10 Q And by whom are you employed and in what  
11 capacity?

12 A I am employed by Duke Energy Business Services,  
13 LLC, and I am the Vice President of Coal Combustion  
14 Projects Operations, Maintenance and Governance  
15 organization.

16 Q Thank you, Ms. Bednarcik. Did you cause to be  
17 prefiled in this docket direct testimony consisting of 30  
18 pages?

19 A Yes, I did.

20 MR. MARZO: And for the record, Chair Mitchell,  
21 we will be presenting Ms. Bednarcik's direct, and she  
22 will reappear later in the proceeding to present her  
23 rebuttal and supplemental.

24 CHAIR MITCHELL: All right. Thank you, Mr.

1     Marzo.

2           Q     Do you have any changes or corrections to your  
3     prefiled direct testimony?

4           A     No, I do not.

5           Q     And if I asked you the same questions today,  
6     would your answers be the same?

7           A     Yes.

8           Q     Did you also cause to be prefiled Bednarcik  
9     Direct Exhibits 1 through 17?

10          A     I did.

11          Q     Do you have any changes or corrections to your  
12     prefiled direct exhibits?

13          A     No, I do not.

14          Q     Thank you, Ms. Bednarcik.

15               MR. MARZO:  Chair Mitchell, at this time I move  
16     that Ms. Bednarcik's prefiled direct testimony be entered  
17     into the record if given orally here today from the  
18     stand, and that Ms. Bednarcik's Direct Exhibits 1 through  
19     17 be marked for identification as prefiled.

20               CHAIR MITCHELL:  All right, Mr. Marzo, hearing  
21     no objection to your motion, it will be allowed.  I would  
22     note that Ms. Bednarcik's direct testimony includes  
23     confidential information and confirm that it will be so  
24     treated in the transcript.

1                   MR. MARZO: Thank you, Chair Mitchell.

2                               (Whereupon, the prefiled direct  
3                               testimony of Jessica L. Bednarcik  
4                               was copied into the record as if  
5                               given orally from the stand.)

6                               (Whereupon, Bednarcik Exhibits  
7                               1-17 were identified as premarked,  
8                               and Confidential Appendix H to  
9                               Bednarcik Exhibits 12 and 15 was  
10                              identified as premarked.)

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**BEFORE THE NORTH CAROLINA UTILITIES COMMISSION****DOCKET NO. E-7, SUB 1214**

In the Matter of:	)	
	)	
Application of Duke Energy Carolinas, LLC	)	<b>DIRECT TESTIMONY OF</b>
for Adjustment of Rates and Charges	)	<b>JESSICA L. BEDNARCIK</b>
Applicable to Electric Utility Service in North	)	<b>FOR DUKE ENERGY</b>
Carolina.	)	<b>CAROLINAS, LLC</b>

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**I. INTRODUCTION**

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

A. My name is Jessica L. Bednarcik. My business address is 400 South Tryon Street, Charlotte, North Carolina, 28202. I am employed by Duke Energy Business Services, LLC, as Vice President, Coal Combustion Products (“CCP”) Operations, Maintenance and Governance. In this docket, I am testifying on behalf of Duke Energy Carolinas, LLC (“DE Carolinas” or the “Company”). As more fully discussed below, my responsibilities include providing governance and operations leadership to Duke Energy Corporation’s (“Duke Energy”) regulated operating companies, including DE Carolinas.

**Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.**

A. I received my Bachelor of Science degree in Chemical Engineering from Clemson University South Carolina in 2001. I am a registered Professional Engineer in North Carolina and South Carolina, and am a Certified Project Management Professional through the Project Management Institute.

From 2001 to 2002, I was an Associate Engineer for Duke/Fluor Daniel (Charlotte, NC). In that role, I designed processes for new combined cycle power generation plants, with a focus on water treatment. From 2003-2004, as an Associate Engineer for Southerland Associates (Charlotte, NC), I worked on numerous design engineering projects. From 2004 to 2005, I was an Associate

1 Engineer for WPC, Inc. (Charlotte, NC), and my responsibilities included  
2 environmental compliance and design.

3 In 2005, I joined the Environmental Engineering group at Duke Energy,  
4 which became the Waste and Remediation Management Group after the Duke  
5 Energy merger with Cinergy Corporation in 2006. In 2013, after the merger  
6 with Progress Energy, I became Manager of the Remediation and  
7 Decommissioning Group at Duke Energy, and my responsibilities included  
8 management of environmental aspects of decommissioning coal fired power  
9 plants. From January 2015 to August 2016, I was the Director of  
10 Environmental, Health and Safety Risk and Compliance Assurance.

11 From September 2016 to July 2018, I held the position of Special  
12 Assignment Leader in the Environmental, Health and Safety ("EHS")  
13 department and managed the provision of permanent water required by North  
14 Carolina House Bill 630. From August 2018 to February 2019, I was the Senior  
15 Director of Grid Assurance.

16 **Q. WHAT ARE YOUR PRIMARY RESPONSIBILITIES AS THE VICE**  
17 **PRESIDENT CCP, OPERATIONS, MAINTENANCE AND**  
18 **GOVERNANCE?**

19 A. I am responsible for operations support, regulatory affairs, and other centralized  
20 CCR functions. My team works to define, establish, and maintain fleet CCP  
21 standards, programs, processes, and best practices within functional areas for  
22 all fossil plant sites. My team also oversees site operations and maintenance



1 (“O&M”) of CCP facilities, including CCR and dam operations and  
2 maintenance, production landfills, decommissioning and demolition, and  
3 byproducts management.

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

5 A. DE Carolinas is seeking recovery of CCR expenses incurred from January 2018  
6 through June 30, 2019, and costs to be incurred through January 31, 2020,  
7 related to compliance with applicable regulatory requirements. The purpose of  
8 my testimony is to explain how DE Carolinas’ compliance actions since January  
9 1, 2018 have been and continue to be reasonable, prudent, and cost-effective  
10 approaches to comply with regulatory requirements. Specifically, I will explain  
11 why the activities supporting the costs are necessary to satisfy federal and state  
12 regulatory requirements; are appropriate in terms of meeting engineering and  
13 environmental standards; and are timely and consistent with the site closure  
14 plans. My testimony demonstrates that the actual costs incurred for ash basin  
15 closure at each site between January 1, 2018 and June 30, 2019, are reasonable  
16 and prudent.

17 **Q. HOW IS YOUR TESTIMONY ORGANIZED?**

18 A. In Section I, I provide information concerning my background and the purpose  
19 of my testimony. In Section II, I provide a summary of the applicable federal  
20 and state regulatory requirements that have driven the activities and costs for  
21 which the Company is seeking recovery in this case. In Section III, I explain  
22 the North Carolina Department of Environmental Quality (“NC DEQ”) order

1 to excavate Allen, Belews Creek, Cliffside/Rogers, and Marshall Ash Basins  
2 that was issued on April 1, 2019. In Section IV, I provide details of the costs  
3 incurred and activities forecasted at each DE Carolinas site during the period of  
4 January 1, 2018 through January 31, 2020, and explain how those costs and  
5 activities were necessary, appropriate, timely, and consistent with anticipated  
6 site closure plans and federal and state regulatory requirements.

7 **Q ARE YOU PROVIDING ANY EXHIBITS WITH YOUR TESTIMONY?**

8 A. Yes. I have attached 17 total exhibits that I discuss further herein.

9 **Q WERE EXHIBITS 1 THROUGH 17 PREPARED OR PROVIDED**  
10 **HEREIN BY YOU, UNDER YOUR DIRECTION AND SUPERVISION?**

11 A. Yes. They were.

12 **II. OVERVIEW OF REGULATORY REQUIREMENTS**

13 **Q. WHAT FEDERAL AND STATE REGULATORY REQUIREMENTS**  
14 **APPLY TO DE CAROLINAS' COAL ASH IMPOUNDMENTS AND**  
15 **LANDFILLS?**

16 A. The Company's closure activities are primarily driven by a set of overarching  
17 federal regulations and state-specific regulatory requirements in its operating  
18 territories in North Carolina and South Carolina.

19 At the federal level, all DE Carolinas sites are subject to and must  
20 comply with the Hazardous and Solid Waste Management System: Disposal of  
21 Coal Combustion Residuals from Electric Utilities; Final Rule promulgated by  
22 the EPA, also known as the CCR Rule. *See* 80 Fed. Reg. 21302 (April 17,

1 2015); 81 Fed. Reg. 51802 (Aug. 5, 2016).<sup>1</sup> For the Company's North Carolina  
2 operations, it must comply with the North Carolina Coal Ash Management Act  
3 of 2014 ("CAMA") enacted by the North Carolina General Assembly as N.C.  
4 Sess. Law 2014-122, as amended June 2015 by the Mountain Energy Act, Sess.  
5 Law 2015-110 and July 2016 by Sess. Law 2016-95. A copy of CAMA is  
6 provided with my testimony as Bednarcik Exhibit 1. In South Carolina, where  
7 it has one former coal-fired plant, DE Carolinas must comply with a negotiated  
8 Consent Agreement with the South Carolina Department of Health and  
9 Environmental Control ("DHEC"). A copy of the W.S. Lee Consent  
10 Agreement is provided with my testimony as Bednarcik Exhibit 2. The  
11 Company must comply with its federal and state obligations concerning the  
12 management and disposal of CCRs, operation and closure of its ash  
13 impoundments and other storage areas ("CCR Units"), and corrective action  
14 and post-closure care.

15 **Q. PLEASE SUMMARIZE THE MAJOR REQUIREMENTS UNDER THE**  
16 **CCR RULE.**

17 A. The EPA's final CCR Rule established national minimum criteria for coal  
18 combustion residuals ("CCR") landfills and surface impoundments that consist  
19 of: (1) location restrictions; (2) design and operating criteria; (3) groundwater  
20 monitoring and corrective action; (4) closure requirements and post-closure

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<sup>1</sup> The CCR Rule is available on EPA's website provided below and is incorporated by reference in my testimony:  
<https://www.epa.gov/coalash/coal-ash-rule>.

1 care; (5) recordkeeping; (6) notification; and (7) internet posting requirements.  
2 These requirements are summarized below and they result in different impacts  
3 at each CCR unit, depending on site-specific factors.

4 The CCR Rule requires that new and existing CCR surface  
5 impoundments and new CCR landfills and lateral expansions meet location  
6 restrictions for: (1) placement above the uppermost aquifer; (2) wetlands; (3)  
7 fault areas; (4) seismic impact zones; and (5) unstable areas. The specific  
8 location restriction assessment that is most likely to affect the Company's CCR  
9 basins, because of typical geological characteristics and historic groundwater  
10 elevations in the Carolinas, is placement above the uppermost aquifer. This  
11 requires that existing CCR basins be constructed with a base that is located no  
12 less than 1.52 meters (five feet) above the upper limit of the uppermost aquifer,  
13 or demonstrate that there will not be an intermittent, recurring, or sustained  
14 hydraulic connection between any portion of the base of the CCR unit and the  
15 uppermost aquifer due to normal fluctuations in groundwater elevations  
16 (including the seasonal high-water table). If a CCR basin does not meet the  
17 location restrictions, then basin closure is required under the CCR Rule. The  
18 CCR Rule contains design criteria for new CCR landfills and lateral extensions  
19 and new CCR surface impoundments, as well as structural integrity criteria for  
20 new and existing CCR surface impoundments, including an assessment of dam  
21 safety factors.

1           The CCR Rule contains standards for how and when CCR basins must  
2           be closed. It provides two alternatives for closure, “closure by leaving ash in  
3           place” (cap-in-place) and “closure through removal of the CCR” (i.e.  
4           excavation). For cap-in-place closure, the CCR Rule provides design criteria  
5           for the closure cap system. Post-closure monitoring requirements are also  
6           detailed in the CCR Rule. Lastly, the CCR Rule requires specific notifications,  
7           such as to state agencies; specific requirements for record keeping, such as the  
8           written operating record; and specific requirements for posting information on  
9           a publicly accessible internet website. The Company’s closure plans that were  
10          developed pursuant to the CCR Rule are provided with my testimony as  
11          Bednarcik Exhibit 3.

12   **Q.   PLEASE SUMMARIZE THE MAJOR REQUIREMENTS UNDER**  
13   **CAMA.**

14   A.   CAMA requires closure of all ash basins in North Carolina, with the closure  
15          option (i.e., excavate or cap-in-place) and closure deadline driven by a  
16          prioritization risk ranking classification process – high priority, intermediate  
17          priority, and low priority. CAMA delineates specific requirements based on  
18          those risk classifications.

19               CAMA specifically designated the CCR surface impoundments at Dan  
20          River and Riverbend as “high priority” sites, which must be closed by  
21          excavation by August 1, 2019.

1 DE Carolina's impoundments at Allen, Belews Creek, Buck,  
2 Cliffside/Rogers, and Marshall were initially classified as intermediate risk. As  
3 amended, CAMA requires that intermediate-risk impoundments be closed as  
4 soon as practicable, but no later than December 31, 2024, with a proposed  
5 closure plan for the impoundments to be submitted as soon as practicable, but  
6 no later than December 31, 2019. Intermediate-risk impoundments must be  
7 excavated. At a minimum, DE Carolinas must dewater the impoundments and  
8 either: (1) convert them to a lined industrial landfill by removing all CCR and  
9 contaminated soil temporarily, safely storing the residuals on-site, and  
10 complying with new CCR landfill requirements; or (2) remove all CCR, return  
11 the impoundment to a non-erosive and stable condition, and transfer the CCR  
12 for disposal in a CCR landfill, industrial landfill, or municipal solid waste  
13 landfill, or use the coal combustion products in a structural fill or for other  
14 beneficial uses as allowed by law.

15 The impoundments at Allen, Belews Creek, Buck, Cliffside/Rogers, and  
16 Marshall received revised low-risk classifications in November 2018 based  
17 upon the establishment of permanent water supplies and rectification of dam  
18 safety deficiencies. Pursuant to CAMA as amended, low-risk impoundments  
19 shall be closed as soon as practicable, but no later than December 31, 2029,  
20 with a proposed closure plan for such impoundments to be submitted as soon  
21 as practicable, but no later than December 31, 2019. At a minimum, the  
22 impoundments at low-risk sites shall be dewatered and closed either by

1 excavation or by cap-in-place, pending NC DEQ's approval of the closure plan.  
2 CAMA applies to all of DE Carolinas' North Carolina CCR surface  
3 impoundments.

4 Like the CCR Rule, CAMA requires the installation of groundwater  
5 wells and provides for a monitoring program and monitoring plan to extend  
6 through the construction period and post-closure care period.

7 Additionally, the 2016 CAMA amendments specifically require the  
8 Company provide permanent replacement water supplies to all homeowners  
9 with drinking water supply wells located within a ½ mile radius from the  
10 established compliance boundaries of the impoundments, without a showing of  
11 groundwater impacts. The 2016 CAMA amendments provide a preference for  
12 permanent replacement water supplies by connection to public water systems;  
13 provided that homeowners may elect to receive filtration systems and the NC  
14 DEQ may determine that connection to a public water supply to a particular  
15 household would be cost prohibitive.

16 The 2016 CAMA Amendments also define certain dam safety actions  
17 to be undertaken by the Company. Upon completion of these actions and  
18 installation of permanent water supplies, the impoundment ranking shall be  
19 low-risk, which provides for the full range of closure options consistent with  
20 the federal CCR Rule. Lastly, the 2016 CAMA amendments require the  
21 Company to implement ash beneficiation projects capable of processing a total  
22 of 900,000 tons of ash per year at three sites for use in cementitious products.

1 The Company initially announced two sites for beneficiation: Buck (DE  
2 Carolinas) and H.F. Lee (DE Progress). The third site, Cape Fear (DE  
3 Progress), was announced on July 1, 2017, the date mandated by the 2016  
4 CAMA amendments.

5 **Q. DO BOTH THE CCR RULE AND CAMA REQUIRE CLOSURE OF**  
6 **THE COMPANY'S CCR BASINS?**

7 A. Yes. The CCR Rule and CAMA require the closure of the Company's CCR  
8 basins.

9 **Q. HOW DO CAMA AND THE CCR RULE WORK TOGETHER TO**  
10 **ADDRESS MANAGEMENT AND REMEDIATION OF THE**  
11 **COMPANY'S CCR BASINS?**

12 A. The CCR Rule requires DE Carolinas to comply with minimum national  
13 criteria, as well as applicable state laws, in the closure of ash basins. Thus, the  
14 CCR Rule provides overarching requirements pursuant to which each state may  
15 set forth more specific regulations. However, as long as minimum national  
16 criteria are satisfied, the CCR Rule does not specify a particular method for  
17 closing ash basins. Thus, the CCR Rule leaves to the states to approve the  
18 method of ash basin closure, as long as such method meets the timeframes and  
19 minimum requirements set forth in the CCR Rule. In North Carolina, the  
20 method of closure required under the CCR Rule has been selected through the  
21 process set forth in CAMA. CAMA sets forth specific closure methods which  
22 are consistent with the CCR Rule's minimum national criteria, for sites deemed



1 intermediate risk. The CCR Rule, as a result of being self-implementing,  
2 requires a greater number of notifications and for information to be posted on a  
3 publicly accessible website. The CCR Rule regulates CCR landfills in addition  
4 to CCR surface impoundments, whereas CAMA only addresses CCR surface  
5 impoundments.

6 **III. APRIL 1, 2019 NC DEQ ORDER TO EXCAVATE ALLEN, BELEWS**  
7 **CREEK, CLIFFSIDE/ROGERS, AND MARSHALL ASH BASINS**

8 **Q. WHAT CLOSURE OPTIONS ARE AVAILABLE UNDER CAMA FOR**  
9 **DE CAROLINAS' LOW-RISK IMPOUNDMENTS AT ALLEN,**  
10 **BELEWS CREEK, CLIFFSIDE/ROGERS, AND MARSHALL?**

11 A. The North Carolina legislature provided three closure options for  
12 impoundments that receive a low-risk classification: cap-in-place, excavation,  
13 or a hybrid approach. These closure options are the same closure options  
14 available under the CCR Rule.

15 **Q. WHAT IS THE COMPANY'S PREFERRED CLOSURE METHOD FOR**  
16 **DE CAROLINAS' LOW-RISK SITES?**

17 A. Cap-in-place is the Company's preferred closure method for Allen,  
18 Cliffside/Rogers, and Marshall. Hybrid cap-in-place closure is the Company's  
19 preferred closure method for Belews Creek. The Company, with assistance  
20 from experienced, professional engineering firms, developed and submitted  
21 Closure Options Analysis Reports ("COA Report") to the NC DEQ in fourth  
22 quarter of 2018 for the four sites. The COA Reports are provided with my

1 testimony as Bednarcik Exhibit 4. The COA Reports demonstrated that cap-in-  
2 place was both environmentally protective and cost-effective.

3 **Q. PLEASE EXPLAIN THE APRIL 1, 2019 ORDER FROM THE NC DEQ**  
4 **CONCERNING EXCAVATION OF ALL ASH BASINS AT ALLEN,**  
5 **BELEWS CREEK, CLIFFSIDE/ROGERS AND MARSHALL.**

6 A. On April 1, 2019, the NC DEQ ordered Duke Energy to excavate all remaining  
7 coal ash impoundments in North Carolina (“NC DEQ Order”). After the  
8 Company submitted the COA Reports, the NC DEQ mandated that DE  
9 Carolinas excavate the impoundments at Allen, Belews Creek,  
10 Cliffside/Rogers, and Marshall under CAMA. The NC DEQ ordered that coal  
11 ash at those sites must be disposed of in a lined landfill.

12 The NC DEQ Order also stated that Duke Energy must submit final  
13 excavation closure plans to the NC DEQ by August 1, 2019. In a May 9, 2019  
14 letter, the NC DEQ revised the closure plan submittal date to December 31,  
15 2019. In those plans, Duke must propose where excavated coal ash will reside  
16 and estimate how long that process will take.

17 **Q. IN ADVANCE OF THE NC DEQ’S ORDER, DID THE COMPANY**  
18 **BEGIN IMPLEMENTING CAP-IN-PLACE CLOSURE AT ANY OF**  
19 **THE FOUR DE CAROLINAS’ SITES COVERED BY THE NC DEQ**  
20 **ORDER?**

21 A. No. With the exception of preliminary closure plan development, none of the  
22 site work that has been conducted at these four sites is specific to cap-in-place

1 closure. All site work to date would also have to be conducted in an excavation  
2 closure. Later in 2019, DE Carolinas anticipates conducting preliminary site  
3 evaluations at these four sites, including boring wells, to evaluate potential  
4 onsite locations for landfills. This will be done to ensure that the Company will  
5 be able to proceed with closure if the NC DEQ Order is upheld.

6 **Q. WHAT WAS DE CAROLINAS' RESPONSE TO THE NC DEQ ORDER?**

7 A. On April 26, 2019, DE Carolinas filed petitions for a contested case hearing  
8 ("Petitions") with the North Carolina Office of Administrative Hearings  
9 ("OAH") to appeal the NC DEQ Order for each of the four applicable sites. In  
10 the appeal, Duke Energy raised several significant procedural and substantive  
11 concerns with the NC DEQ Order. While I am not a lawyer, my understanding  
12 is that enforcement of the NC DEQ Order will be stayed during the pendency  
13 of the appeal before OAH. Until this appeal is resolved, DE Carolinas will  
14 continue closure planning and activities at the affected sites as long as the work  
15 would be utilized for both an excavation closure as well as cap-in-place closure,  
16 excluding the preliminary landfill site evaluation work previously described.

1                    **IV.     SITE-BY-SITE CLOSURE ACTIVITIES AND**  
2                    **ASSOCIATED COSTS**

3     **Q.     PLEASE EXPLAIN THE CLOSURE ACTIVITIES RELATING TO**  
4             **ALLEN, BELEWS CREEK, CLIFFSIDE/ROGERS, AND MARSHALL**  
5             **FROM JANUARY 1, 2018 THROUGH JANUARY 31, 2020.**

6     A.     The ash basins at Allen, Belews Creek, Cliffside/Rogers, and Marshall earned  
7             low-risk classifications under CAMA, which means they would be eligible for  
8             cap-in-place closure. Due to their shared classifications, these four plants are  
9             under similar closure schedules, and the activities conducted at these sites  
10            beginning on January 1, 2018 through January 31, 2020, were relatively the  
11            same.

12                    Related to basin closure, the Company, in conjunction with engineering  
13                    consultants, developed and submitted the COA Reports. As discussed in  
14                    Section III of my testimony, closure-in-place represented a cost-effective and  
15                    environmentally protective means of complying with CAMA and the federal  
16                    CCR rule. To remain on target with regulatory closure deadlines, the Company  
17                    then began developing preliminary draft closure plans to execute cap-in-place  
18                    at its low-risk sites, although no onsite work was performed.

19                    As I previously explained, the NC DEQ Order suggests alterations to  
20                    the Company's closure strategy for its low-risk impoundments. The Company  
21                    is appealing the NC DEQ Order. During the pendency of the appeal, the

1 Company has not and will not perform onsite closure activities that would be  
2 undertaken solely to achieve excavation or closure-in-place.

3 Specifically, certain activities are required under both excavation and  
4 cap-in-place, and DE Carolinas will continue to execute those overlapping  
5 closure activities until the appeal is resolved. Those activities and associated  
6 costs include pursuing environmental permits, which are required to comply  
7 with environmental permitting regimes including Erosion and Sediment  
8 Control, National Pollutant Discharge Elimination System (“NPDES”), and  
9 storm water pollution prevention plan; and performing groundwater activities,  
10 including data review and reporting of groundwater monitoring to comply with  
11 the CCR Rule, CAMA, and the Company’s NPDES permits. Additionally, the  
12 Company is dewatering the impoundments at its sites, which would be  
13 necessary under closure-in-place and closure by excavation.

14 The Company has also incurred costs to plan, design, and install  
15 permanent water supplies to neighboring residents to comply with CAMA.  
16 Permanent water supply costs included the planning, design, and installation of  
17 municipal water mains and/or service lines; the planning, design and  
18 installation of water treatment systems; and taxes and fees for permitting and  
19 connection of the water lines and water treatment systems. Costs also includes  
20 communications to homeowners and the development of reports required by the  
21 NC DEQ to certify completion of the permanent water supply provision.

1           Lastly, the Company has incurred several miscellaneous costs,  
 2           including operating and maintenance costs related to the coal ash landfills and  
 3           basins. Maintenance and operations activities are performed on retired and  
 4           active CCR impoundments and facilities to ensure compliance with state and  
 5           local regulations, as well as operating and post-closure permits. Typical  
 6           activities include vegetation management to support required inspections, as  
 7           well as repairs to dams, landfills, structural fills, and ash stacks.

8           A summary of the activities performed and costs incurred from January  
 9           1, 2018 through June 30, 2019 for Allen, Belews Creek, Cliffside/Rogers, and  
 10          Marshall is provided in Table 1 below.

<i>Table 1</i>	<b>Actual cost incurred 1/1/2018 through 6/30/2019</b>			
	<u>Allen</u>	<u>Belews Creek</u>	<u>Cliffside/Rogers</u>	<u>Marshall</u>
EHS	\$4,711,010	\$4,788,547	\$5,803,812	\$4,437,090
Basin Closure / Engineering Design	\$2,195,969	\$2,784,491	\$2,487,578	\$5,421,021
Basin Support Projects	\$2,564	\$0	\$48,402	\$11,228,600
Permanent Water Supply	\$9,326,407	\$565,895	\$1,766,241	\$1,077,337
Permitting	\$415,244	\$687,758	\$565,534	\$265,127
Other	\$1,402,680	\$3,647,793	\$2,023,193	\$2,380,727
<b>Total Cost</b>	<b>\$18,053,874</b>	<b>\$12,474,484</b>	<b>\$12,694,760</b>	<b>\$24,809,902</b>

1   **Q.     CAN YOU PROVIDE A FURTHER BREAKDOWN OF THE WORK**  
2           **THAT WAS CONDUCTED WITHIN THE SIX CATEGORIES OF**  
3           **ACTIVITIES THAT YOU PROVIDED IN TABLE 1?**

4   A.     Yes. For Allen, Belews Creek, Cliffside/Rogers, and Marshall, I have provided  
5           in Bednarcik Exhibits 5, 6, 7, and 8, respectively, site details and a description  
6           of the work performed and to be performed January 1, 2018 through January  
7           31, 2020.

8   **Q.     PLEASE EXPLAIN THE CLOSURE ACTIVITIES OCCURRING AT**  
9           **BUCK FROM JANUARY 1, 2018 THROUGH JANUARY 31, 2020.**

10  A.     Buck was selected as one of three Duke Energy sites for the installation of a  
11           beneficiation project pursuant to CAMA; therefore, the Company will be  
12           closing the impoundments at Buck by excavation. Excavated ash from Buck  
13           will be processed through the beneficiation plant for use in the concrete  
14           industry, as opposed to being placed in a lined landfill.

15                 To prepare the site for excavation, DE Carolinas began bulk dewatering  
16           of the Buck impoundments following the receipt of a revised NPDES  
17           wastewater discharge permit. The Company has installed groundwater  
18           monitoring wells, which it regularly samples and monitors, to comply with the  
19           CCR Rule and CAMA.

20                 DE Carolinas will be utilizing the SEFA STAR technology to process  
21           the ash from Buck. Construction of the beneficiation plant began in May 2018.  
22           Initial construction involved the installation of erosion control measures for the

1 site. A sedimentation basin was constructed and placed into service on January  
2 22, 2019, to capture sediment or soil that is disturbed during construction. After  
3 the completion of the sedimentation basin, construction began on the  
4 foundations and support structures for the beneficiation plant. Additionally, in  
5 2019, the Company will install the necessary utilities to operate the  
6 beneficiation plant.

7 To supply the beneficiation plant with ash when it becomes operational,  
8 the Company has been developing an excavation plan and an environmental  
9 erosion control plan for its impoundments. DE Carolinas is also designing an  
10 onsite haul road between the impoundments and the new beneficiation plant to  
11 transport the excavated ash.

12 A summary of the activities performed and costs incurred from January  
13 1, 2018 through June 30, 2019 for Buck is provided in Table 2 below. A further  
14 description of the actual and forecasted site-specific work from January 1, 2018  
15 through January 31, 2020, at Buck is provided with my direct testimony as  
16 Bednarcik Exhibit 9. A copy of the Company's excavation plan for Buck is  
17 also being provided as Bednarcik Exhibit 10.



<i>Table 2</i>	<b>Actual costs incurred 1/1/2018 through 6/30/2019</b>
	<u>Buck</u>
EHS	\$1,696,180
Basin Closure	\$6,432,828
Beneficiation Facility Construction	\$94,877,353
Basin Support Projects	\$2,355,252
Municipal Water Lines	\$4,765,720
Permitting	\$408,947
Other	\$831,887
<b>Total Cost</b>	<b>\$111,368,167</b>

1    **Q.    PLEASE EXPLAIN THE CLOSURE ACTIVITIES OCCURRING AT**  
2       **DAN RIVER FROM JANUARY 1, 2018 THROUGH JANUARY 31, 2020.**

3    **A.**    DE Carolinas is closing its impoundments at Dan River by excavation, which  
4       must be completed by August 1, 2019. The Company completed excavation of  
5       ash from the impoundments on May 20, 2019.

6                Excavated ash from the Dan River impoundments has been transferred  
7       to an onsite, CCR landfill. From January 1, 2018 through May 20, 2019, DE  
8       Carolinas excavated 1,426,200 tons of ash from the Primary and Secondary Ash  
9       Basins at the Dan River site, which was then placed in the onsite landfill or  
10      supplied to Roanoke Cement for beneficial reuse. Additional excavated  
11      material that did not meet standards for CCR landfill disposal was sent to offsite  
12      landfills. The Company has begun the process of closing the CCR landfill in  
13      compliance with state and federal standards.

14              In conjunction with its excavation activities, the Company also  
15      performed dam decommissioning work on its basins to meet post-closure dam  
16      safety requirements. The dam decommissioning work began in May 2018.

A summary of the activities performed and costs incurred from January 1, 2018 through June 30, 2019 for Dan River is provided in Table 3 below. A further description of the actual and forecasted site-specific work from January 1, 2018 through January 31, 2020, at Dan River is provided with my testimony as Bednarcik Exhibit 11. Additionally, with my testimony, I am providing the Site Analysis and Removal Plan (“SARP”) and excavation plan for Dan River as Bednarcik Exhibit 12 and Bednarcik Exhibit 13, respectively.

<i>Table 3</i>	Actual costs incurred from 1/1/2018 through 6/30/2019
	<u>Dan River</u>
EHS	\$1,743,634
Basin Closure	\$61,720,567
Permanent Water Supply	\$24,281
Permitting	\$239,059
Other	\$(158,201)
<b>Total Cost</b>	<b>\$63,569,340</b>

**Q. PLEASE EXPLAIN THE CLOSURE ACTIVITIES OCCURRING AT RIVERBEND FROM JANUARY 1, 2018 THROUGH JANUARY 31, 2020.**

A. DE Carolinas has completed excavation and removal of CCR materials from the impoundments at Riverbend. During the period January 1, 2018 to June 30, 2019, a total of 1,479,066 tons of ash was excavated from the basins, ash stack, and cinder pit and transported to the Brickhaven Structural Fill site in Chatham County, NC. A total of 19,543 tons of ash containing asbestos-containing-material was excavated from the cinder pit and transported to the Republic Services Charlotte Motor Speedway Landfill in Cabarrus County, NC. A

1 cumulative total of 5,351,308 tons of ash has been removed from the site. Ash  
2 basin closure was completed on March 16, 2019.

3 Similar to Dan River, on April 22, 2019, DE Carolinas began dam  
4 decommissioning and site grading work to meet post-closure dam safety  
5 standards.

6 DE Carolinas is required by CAMA and its DEQ-issued NPDES permit  
7 to conduct groundwater monitoring at Riverbend. From January 1, 2018  
8 through present, DE Carolinas has installed additional wells to meet these  
9 regulatory requirements. The Company regularly monitors and samples these  
10 wells to assess the groundwater quality at this site.

11 A summary of the activities performed and costs incurred from January  
12 1, 2018 through June 30, 2019, for Riverbend is provided in Table 4 below. A  
13 further description of the actual and forecasted site-specific work from January  
14 1, 2018 through January 31, 2020, at Riverbend is provided in Bednarcik  
15 Exhibit 14 to my direct testimony. Additionally, I am providing the Site  
16 Analysis and Removal Plan (“SARP”) and excavation plan for Riverbend as  
17 Bednarcik Exhibit 15 and Bednarcik Exhibit 16, respectively.

<b>Table 4</b>	<b>Actual costs incurred 1/1/2018 through 6/30/2019</b>
	<u>Riverbend</u>
EHS	\$1,734,965
Basin Closure	\$100,835,239
Permanent Water Supply	\$1,189
Permitting	\$282,874
Other	\$290,792
<b>Total Cost</b>	<b>\$103,145,059</b>

1   **Q.     ARE THERE ANY ADDITIONAL COSTS RELATED TO CLOSURE**  
2       **AT RIVERBEND FOR WHICH THE COMPANY IS REQUESTING**  
3       **RECOVERY IN THIS CASE?**

4   A.    Yes. In 2014, Duke Energy executed contracts with Charah, LLC dispose of  
5       coal ash from DE Carolinas' Riverbend site, as well as DE Progress' Sutton,  
6       Cape Fear, H.F. Lee, and Weatherspoon sites. The contract with Charah  
7       required Duke Energy to provide a minimum amount of coal ash for disposal at  
8       Charah's Brickhaven and Colon mines. Due to changing circumstances,  
9       including changes to Duke Energy's closure strategy at those sites after the  
10      contract was entered into due to ammendments to CAMA requiring  
11      beneficiation, Duke Energy did not provide the amount contracted for  
12      Brickhaven and did not send any material to the Colon mine. As a result, the  
13      contract with Charah was terminated, with Duke Energy incurring a fulfillment  
14      fee of \$80 million. Specifically, \$46,329,946 has been allocated to DE  
15      Carolinas to account for costs incurred by Charah associated with the ash from  
16      the Riverbend location, as well as future estimated costs for leachate  
17      management, capping of the landfill, and post closure maintenance.

1   **Q.    WAS IT REASONABLE AND PRUDENT FOR THE COMPANY TO**  
2       **ENTER INTO ARRANGEMENTS WITH CHARAH THAT COULD**  
3       **IMPOSE FULFILLMENT COSTS IN RELATION TO THE**  
4       **BRICKHAVEN AND COLON MINES?**

5    A.    Yes. Where agreements require a contractor to develop large infrastructure  
6       projects to be able to perform the needed contracted service, it is common and  
7       reasonable to require minimum investment from the company receiving the  
8       service. This is particularly the case where the market does not indicate a  
9       readily “next available client” to use the completed infrastructure for the  
10      purpose for which it was designed. To facilitate transport and disposal of coal  
11      ash to Brickhaven and Colon mines, Charah’s infrastructure arrangements  
12      involved the purchase of land, permitting costs, rail spur and unloading system  
13      construction, landfill construction, and leachate system construction. Even with  
14      the fulfillment costs, the Charah option was the best option for customers  
15      compared to the other options that Duke Energy had available at the time to  
16      meet regulatory requirements.

17   **Q.    PLEASE EXPLAIN THE CLOSURE ACTIVITIES OCCURRING AT**  
18       **W.S. LEE FROM JANUARY 1, 2018 THROUGH JANUARY 31, 2020.**

19   A.    DE Carolinas is closing the ash storage areas at W.S. Lee by excavation. The  
20      major activities occurring after January 1, 2018 have been site preparation and  
21      excavation of the Secondary Ash Basin. Ash from the Secondary Ash Basin is  
22      being temporarily stored in the Primary Ash Basin.

1 Before excavation could begin on the Secondary Ash Basin, it had to be  
2 decanted and then dewatered. DE Carolinas began decanting the Secondary  
3 Ash Basin in September 2018, and dewatering began in February 2019.  
4 Interstitial dewatering of the Primary and Secondary Ash Basins began in the  
5 fourth quarter of 2018 and will continue throughout the closure process.

6 At the same time, the Company also began dewatering the Primary Ash  
7 Basin. DE Carolinas began excavating ash from the Secondary Ash Basin in  
8 March 2019, which is temporarily being placed in the Primary Ash Basin.  
9 Excavation of the Secondary Ash Basin was completed on June 14, 2019.  
10 Construction of a sediment basin intended to support current excavation  
11 activities and future landfill construction began in January 2019 and was  
12 completed in July 2019.

13 DE Carolinas has also performed groundwater activities, including  
14 collection, analysis, and reporting of groundwater monitoring to comply with  
15 the CCR Rule and State requirements.

16 A summary of the activities performed and costs incurred from January  
17 1, 2018 through June 30, 2019 for W.S. Lee is provided in Table 5 below. A  
18 further description of the actual and forecasted site-specific work from January  
19 1, 2018 through January 31, 2020, at W.S. Lee is provided in Bednarcik Exhibit  
20 17 to my direct testimony.

<i>Table 5</i>	Actual costs incurred 1/1/2018 through 6/30/2019
	<u>W.S. Lee</u>
EHS	\$1,455,463
Basin Closure	\$10,706,727
Permitting	\$294,395
Basin Support	\$472,873
Other	\$582,541
<b>Total Cost</b>	<b>\$13,511,999</b>

1    **Q.    WERE YOU ABLE TO REACH A CONCLUSION ABOUT WHETHER**  
2        **THE COSTS AND ACTIVITIES THAT YOU DESCRIBE IN YOUR**  
3        **FOREGOING TESTIMONY WERE REASONABLE AND PRUDENT?**

4    A.    Yes. Based upon my training, experience, understanding of the Company's  
5        regulatory obligations, and review of the Company's records, I was able to  
6        conclude that the actual and forecasted activities and costs to close the DE  
7        Carolinas impoundments were reasonable and prudent.

8    **Q.    WHAT FACTORS DID YOU CONSIDER WHEN MAKING YOUR**  
9        **REASONABLENESS AND PRUDENCY DETERMINATION?**

10   A.    I evaluated the reasonableness and prudence of the Company's closure  
11        activities and associated costs based upon the following criteria: 1) whether the  
12        activities performed and to be performed are necessary; 2) whether the costs for  
13        the necessary activities are appropriate; and 3) whether the closure projects are  
14        meeting Company and regulatory deadlines.

1   **Q.    ARE THE CLOSURE ACTIVITIES THAT ARE DESCRIBED IN YOUR**  
2       **TESTIMONY NECESSARY?**

3    A.    Yes. As part of my role within CCP, I have become well-versed in the federal  
4       and state regulatory obligations relating to DE Carolinas' CCR storage  
5       facilities. These regulations dictate how and by when closure must be achieved  
6       and dictate other specific environmental requirements. For any major  
7       undertaking, like the closure projects described above, Duke Energy relies on  
8       both Company and third-party technical experts to provide consulting,  
9       engineering, and construction services. For each site, the closure activities that  
10      were performed and that are planned to be performed are based on strategies,  
11      plans, scientific expertise, and schedules developed through coordination  
12      between technical experts both within and outside the Company to satisfy  
13      regulatory obligations. Each closure activity described above and for which the  
14      Company is requesting cost recovery can be traced to a provision of the federal  
15      CCR rule, CAMA, or other state regulatory requirement. Therefore, I have  
16      concluded that the closure activities described in my testimony for each DE  
17      Carolinas site were necessary to comply with Federal and State regulatory  
18      obligations.



1   **Q.    HAS THE COMPANY TAKEN SUFFICIENT MEASURES TO ENSURE**  
2       **THAT   COSTS   FOR   ITS   CLOSURE   PROJECTS   ARE**  
3       **APPROPRIATELY MANAGED AND MINIMIZED?**

4    A.    Yes. DE Carolinas has a robust system in place to review the costs of its CCR  
5       Unit closure projects from inception to payment. Specifically, DE Carolinas  
6       has implemented and followed strict contracting policies and procedures to  
7       receive and evaluate bids for its closure activities. Purchases were procured  
8       under the purview of the Duke Energy Purchasing Controls Policy, which lays  
9       out requirements for competitive bidding, vendor selection and purchase order  
10      use. All expenditures against purchase orders are reviewed and approved under  
11      the requirements documented in the Delegation of Authority Policy.

12           DE Carolinas also maintains detailed budgets, which are updated  
13      quarterly to incorporate the knowledge and experience the Company has gained  
14      during the project. Scope changes or estimate deviations are documented and  
15      approved as appropriate.

16           These processes are utilized to ensure that costs that the Company has  
17      and will incur for tasks associated with the CCR rule, CAMA, and other state  
18      regulatory requirements are not exorbitant, unnecessary, wasteful, or  
19      extravagant and are consistent with the costs of similar services on the open  
20      market. The costs incurred for all closure activities were, and continue to be  
21      reviewed through rigorous purchasing and expenditure review processes.

1   **Q.    ARE THE COMPANY'S CLOSURE ACTIVITIES PROCEEDING ON**  
2   **SCHEDULE?**

3   A.    Yes. Complex projects require coordination between company personnel, with  
4        permitting authorities (state and federal regulatory agencies), and contractors.  
5        To that end, DE Carolinas has developed extensive and detailed plans and  
6        schedules related to each aspect of the overall site closure.

7            I visited each site and met with site managers, and regularly discuss the  
8        status and progress of the closure projects. I have also reviewed site closure  
9        plans and schedules. I have attended monthly project status review meetings  
10       and reviewed status reports covering January 1, 2018 to the present.

11           The closure plans and schedules that the Company has developed for  
12       each site detail the tasks and strategy being executed to meet its federal and  
13       state regulatory deadlines. Where applicable, plans were submitted to and  
14       approved by regulatory agencies, and the Company developed schedules to  
15       meet the approved commitments. Schedules are reviewed, at a minimum,  
16       monthly with senior management to ensure adherence to regulatory  
17       requirements and deadlines. Inevitably, all complex projects face complicating  
18       factors, which may require modification of plans and schedules. DE Carolinas'  
19       managerial oversight of these projects ensures that the Company will still be  
20       able meet its regulatory obligations despite these complications. DE Carolinas'  
21       closure projects are all on target to meet applicable regulatory requirements.  
22       Therefore, I have concluded that the Company has been properly managing its

1 closure projects to ensure compliance with project schedules and regulatory  
2 deadlines.

3 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

4 A. Yes.

1           Q     Ms. Bednarcik, did you prepare a Summary of  
2     your testimony?

3           A     I did.

4                     MR. MARZO: Chair Mitchell, that Summary was  
5     provided to the Commission and parties to these dockets,  
6     as required by the Commission's Orders, and I'd ask that  
7     the Summary of Ms. Bednarcik be entered into the record  
8     as if given orally here today.

9                     CHAIR MITCHELL: All right. Hearing no  
10    objection to that motion, it's allowed.

11                                 (Whereupon, the Summary of the direct  
12                                 testimony of Jessica L. Bednarcik was  
13                                 copied into the record as if given  
14                                 orally from the stand.)

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**Duke Energy Carolinas, LLC**  
**Summary of Direct Testimony of Jessica Bednarcik**  
**Docket No. E-7, Sub 1214**

My name is Jessica L. Bednarcik. I am the Vice President, Coal Combustion Products (“CCP”) Operations, Maintenance and Governance. The purpose of my direct testimony is to explain how DE Carolinas’ Coal Combustion Residual, or CCR, compliance actions since January 1, 2018 have been and continue to be reasonable, prudent, and cost-effective approaches to comply with regulatory requirements. I begin by providing a summary of the applicable federal and state regulatory requirements that have driven the activities and costs for which the Company is seeking recovery in this case, and then demonstrate that each of the incurred costs were reasonable and necessary to comply with these requirements.

From January 1, 2018 through January 30, 2020, some of the key closure activities that the Company has undertaken at its CCR sites are as follows: At Allen, Belews Creek, Cliffside, and Marshall, the Company performed initial site work to prepare for closure. Although the Company originally planned to close each of these low risk sites by cap-in-place, it agreed in December 2019 to excavation after entering into a settlement agreement with the North Carolina Department of Environmental Quality and a variety of special interest groups. None of the site work that has been conducted at these four sites, and for which the Company is seeking recovery, is specific to cap-in-place closure and would have been undertaken had the Company pursued excavation from the start.

At the Buck site, which has been selected as one of three sites for installation of a beneficiation plant under the North Carolina Coal Ash Management Act, the Company has prepared the site for excavation and begun construction of the beneficiation plant utilizing the SEFA STAR technology, among other things. At Dan River, the Company has excavated 1,426,200 tons of ash from the plant’s Primary and Secondary Ash Basins, and the Company has begun the process of closing the CCR landfill. At Riverbend, the Company has excavated

a total of 1,479,066 tons of ash from the basins, ash stack, and cinder pit and transported to the Brickhaven Structural Fill site in Chatham County, and closure of the basin was completed on March 16, 2019. Also, at Riverbend, the Company is seeking recovery of the fulfillment fee it paid to Charah, LLC. The fee was part of a contractual provision that was intended to protect both parties. The fulfillment fee was incurred after CAMA was amended to require beneficiation, significantly reducing the total amount of ash earmarked for disposal at Charah's Brickhaven mine pursuant to the Company's contract with Charah and triggering the fulfillment fee provisions. Finally, at W.S. Lee, the Company has engaged in site preparation and excavation of the Secondary Ash Basin as well as dewatering of the Primary Ash Basin.

Based upon my training, experience, understanding of the Company's regulatory obligations, and review of the Company's records, the costs incurred to close the DE Carolinas impoundments were reasonable and prudent.

This concludes my summary of my direct testimony.

1 MR. MARZO: Chair Mitchell, Ms. Bednarcik is  
2 available for cross examination from the parties and  
3 questions from Commissioners.

4 CHAIR MITCHELL: All right. Thank you, Mr.  
5 Marzo. We will begin with the Public Staff.

6 MS. JOST: Thank you, Chair Mitchell.

7 CROSS EXAMINATION BY MS. JOST:

8 Q Good afternoon, Ms. Bednarcik. I am Megan Jost  
9 with the Public Staff.

10 A Good afternoon.

11 Q Good afternoon.

12 CHAIR MITCHELL: Wait. Ms. Jost, let me  
13 interrupt you.

14 MS. JOST: Yes.

15 CHAIR MITCHELL: I apologize. I just want to  
16 note that we will conclude our day at 1:00. I just want  
17 to put you on notice before you get started.

18 MS. JOST: Okay.

19 CHAIR MITCHELL: Thank you. You may proceed.

20 Q All right. Ms. Bednarcik, on page 4 of your  
21 direct testimony, you state that the purpose of your  
22 testimony is to explain how the Company's coal ash  
23 compliance actions since January 1st of 2018 have been  
24 reasonable and prudent and cost-effective approaches to

1      comply with regulatory requirements; is that correct?

2            A      Yes.

3            Q      While your testimony discusses the Company's  
4      coal ash compliance actions since January 1st of 2018,  
5      you were not in your current role at any point in the  
6      year 2018; is that correct?

7            A      That is correct.

8            Q      In fact, when you filed your direct testimony  
9      in this case, you had only been in your current position  
10     for about seven months; is that correct?

11          A      Yes.

12          Q      On pages 23 and 24 of your direct testimony,  
13     you discuss the contract Duke executed with Charah, LLC,  
14     for the disposal of ash at the Brickhaven and Sanford  
15     mines; is that correct?

16          A      That is correct.

17          Q      Given that you were not in your current role at  
18     the time, were you involved in the negotiation of that  
19     contract?

20          A      While I was not involved with the negotiation  
21     of the contract, I did have multiple discussions with  
22     personnel who were involved in that contract and in the  
23     execution of that contract.

24          Q      Okay. But you did not have any first-hand



1 experience with it, did you?

2 A I did not.

3 Q Thank you. On pages 18 through 20 of your  
4 testimony -- your direct testimony, you discuss  
5 activities at the Company's Buck station, including the  
6 beneficiation projects being constructed there; is that  
7 correct?

8 A Yes.

9 Q You were not in your current role at the time  
10 that Duke conducted the Request for Information, or RFI,  
11 for the project technology; is that correct?

12 A That is correct.

13 Q And is it also correct that you were not in  
14 your current role at the time Duke conducted the Request  
15 for Proposals, or RFP, for the construction of the Buck  
16 beneficiation project?

17 A That is correct.

18 Q Given this timing, were you involved in the RFI  
19 or the RFP processes?

20 A For specifically what, Ms. Jost?

21 Q Were you involved in the process of developing  
22 those -- the RFI or the RFP?

23 A So for --

24 Q For the -- I'm sorry. For the Buck

1       beneficiation station.

2               A       I was not.

3               Q       And, finally, were you involved in the process  
4       that resulted in Zachry Industrial being awarded the  
5       engineering, procurement, and construction contract for  
6       the Buck beneficiation project?

7               A       I was not.

8               Q       Thank you.

9               MS. JOST: Those are all my questions.

10              CHAIR MITCHELL: And Ms. Jost, just to confirm,  
11       the Public Staff has no further questions for the  
12       witness?

13              MS. JOST: That's correct.

14              CHAIR MITCHELL: Okay. Thank you. All right.  
15       Attorney General's Office?

16       CROSS EXAMINATION BY MS. TOWNSEND:

17              Q       Good afternoon, Ms. Bednarcik. I'm Teresa  
18       Townsend with the Attorney General's Office. How are you  
19       this afternoon?

20              A       I am doing well.

21              Q       Good. One moment, let me get my stuff together  
22       here. I didn't quite expect it. Okay. I am going to  
23       ask you questions related to coal ash and Duke Energy  
24       Carolinas' management of its impoundment at its eight

1 coal-fired plants. You have a Bachelor of Science in  
2 Chemical Engineering; is that correct?

3 A That is correct.

4 Q Do you have any education in hydrogeology?

5 A I do not.

6 Q Okay. You have certainly testified extensively  
7 on the subject of coal ash, though, correct?

8 A That is correct.

9 Q Are you aware that Duke Energy has provided us  
10 with a definition of coal ash?

11 A If you could point me where that is, I would --  
12 I would appreciate it.

13 Q Happy to. If we look at De May AGO Direct  
14 Cross Exhibit Number 1, that is the Insurance Complaint.

15 A If you would provide to me what the number was  
16 for the prefiled on exhibits, I would be able to find it  
17 a little bit quicker.

18 Q Sure. The prefiled exhibit was 13.

19 A Thank you.

20 Q Uh-huh.

21 A I have 13 in front of me now.

22 Q Great. If we -- if you'll go to page 10, and  
23 it's paragraph 40, but it is the sentence that begins --  
24 are you there? I'm sorry. I don't mean to rush you.

1           A     Yes. I'm on page 10.

2           Q     All right. Awesome. At the very top, the  
3 second full sentence begins "Coal ash contains..." Do  
4 you see where I am?

5           A     Yes, I do.

6           Q     All right. "...contains various heavy metals  
7 and potentially hazardous constituents, including  
8 arsenic, barium, cadmium, chromium, lead, manganese,  
9 mercury, nitrates, sulfates, selenium, and thallium.  
10 Coal ash has not been defined itself as a hazardous  
11 substance or hazardous waste under federal law, although  
12 some constituents of coal ash may be hazardous in  
13 sufficient quantities or concentrations." Did I read  
14 that correctly?

15          A     Yes, you did.

16          Q     Thank you. Are you familiar with this action  
17 by the Company against the insurance company?

18          A     I am -- I'm familiar with it.

19          Q     All right. And were you working with Duke  
20 Energy at the time of the Dan River spill that occurred  
21 in February of 2014?

22          A     Yes, I was.

23          Q     Okay. As a result of that spill, are you aware  
24 that there was a federal criminal proceeding for

1 violations of the Clean Water Act at the Dan River  
2 facility, as well as violations cited at Riverbend for  
3 DEC and violations at Asheville and Cape Fear for DEP; is  
4 that correct?

5 A I believe that's correct.

6 Q All right. And that criminal proceeding was  
7 finalized in May of 2015. Does that date sound familiar  
8 to you?

9 A I don't have that date memorized, but subject  
10 to check, I would agree with you.

11 Q Thank you. As a result of that federal  
12 criminal proceeding, are you aware that Duke was placed  
13 on probation for five years?

14 A Yes. I am aware of that.

15 Q Okay. And as part of that probation for that  
16 period of time, the federal court appointed a monitor who  
17 was to audit each of Duke Energy's facilities and provide  
18 an annual report for the Court during that five-year  
19 program -- or five-year probation period. Are you aware  
20 of that?

21 A Yes, I am.

22 Q All right. And have you been privy to the coal  
23 ash -- the CAM reports? I will refer them -- to them as  
24 that. Have you seen those CAM reports?

1           A       Yes, I have.

2           Q       All right. If you would pull Mr. Hart's  
3 Exhibit 48.

4                   MR. MARZO: Ms. Townsend, could you repeat that  
5 number? You faded out.

6                   MS. TOWNSEND: Yeah. Mr. Hart, Exhibit 4-8,  
7 48. And that is the July 2019 Allen Environmental Audit  
8 in Support of the CAM in the federal criminal case.

9           A       Can you repeat the number for me, please, just  
10 to make sure I have the right one?

11          Q       Absolutely. It's Exhibit 4-8, 48, and it's the  
12 July 2019 Allen CAM report.

13          A       I have that in front of me.

14          Q       All right. Awesome. Okay. If you will go to  
15 -- talking about Allen for a while, if you will go to 1-2  
16 in that report.

17          A       I am on that page.

18          Q       Okay. If you can confirm what it said in that  
19 -- that report that says that Allen began operation in  
20 1997 (sic) -- I'm sorry -- 1967 in Belmont and is located  
21 on over 2,000 acres, starting with two units, and then  
22 expanding and ending with five units. Is that your  
23 understanding of the Allen facility?

24          A       So if you can remind me -- I was looking at

1 page 1 dash --

2 Q -- 2. That's correct.

3 A I see where you're talking about now.

4 Q Okay.

5 A I'm sorry. I was not -- I was not at the  
6 correct location.

7 Q No problem.

8 A I do see section 1.2 of that section -- on that  
9 page.

10 Q Okay. And we could just simply read quickly.  
11 It might be a little easier than trying to follow my  
12 question. It says the Allen facility is located on 2,220  
13 acres in Belmont, North Carolina, and that it began  
14 operation in 1957 with Units 1 and 2, Unit 3 coming on  
15 line in 1959, 4 in the 1960, and Unit 5 in 1961; is that  
16 correct?

17 A That is correct.

18 Q And you've been to the Allen facility, correct?

19 A Yes.

20 Q Okay. Then they speak on page 1-3 and 1-4  
21 about what at Allen constitutes what they call a CCR  
22 management area. And CCR, of course, meaning coal  
23 residuals, correct?

24 A It's coal combustion residuals.

1           Q     Right. All right. And so those are -- excuse  
2     me -- Allen, a retired ash basin, correct?

3           A     Correct.

4           Q     From structural fills?

5           A     Yes.

6           Q     And ash storage -- ash storage areas, and there  
7     apparently are two unlined ash storage areas, correct?

8           A     That is correct.

9           Q     All right. We have a retired ash basin  
10    landfill, correct?

11          A     Yes.

12          Q     And an active ash basin?

13          A     Yes. That's all areas at the Allen site that  
14    have coal ash associated with them.

15          Q     Okay. And can you tell me when the Allen  
16    retired ash basin was retired?

17          A     It was -- if you'll give me one moment, and I  
18    have that -- that information. The Allen retired ash  
19    basin was -- ended operation in 1973.

20          Q     Thank you. And can you tell us how?

21          A     It was retired with -- well, currently, it has  
22    a -- the retired ash basin landfill that's located on top  
23    of it, and that retired ash basin landfill does have a  
24    liner associated with it, and there are other parts of



1 the RAB that is -- has soil on top of it as a cover.

2 Q All right. So they took the retired ash basin  
3 and put a landfill on top of it; is that correct?

4 A Over portions of it, there is a permitted  
5 landfill that's on top of the retired ash basin.

6 Q But it doesn't cover the entire ash basin; is  
7 that correct?

8 A That is correct.

9 Q All right. Turning to the subject of wells --  
10 MS. TOWNSEND: I'm going to get into another  
11 topic, Chair Mitchell. I don't know if you want me to.  
12 It's 12:57.

13 CHAIR MITCHELL: Yeah. It may make sense, Ms.  
14 Townsend, at this point in time to end for the day before  
15 you begin your next set of questions. So we will be in  
16 recess until Tuesday morning at 9:00. Thank you very  
17 much, everyone.

18 MS. TOWNSEND: Thank you.

19 (The hearing was recessed, to be continued  
20 on September 8, 2020, at 9:00 a.m.)

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STATE OF NORTH CAROLINA

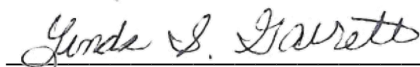
COUNTY OF WAKE

C E R T I F I C A T E

I, Linda S. Garrett, Notary Public/Court Reporter,  
do hereby certify that the foregoing hearing before the  
North Carolina Utilities Commission in Docket Nos. E-7,  
Sub 1214, E-7, Sub 1213, and E-7, Sub 1187, 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 8th day of September, 2020.



Linda S. Garrett, CCR  
Notary Public No. 19971700150