

1 PLACE: Dobbs Building, Raleigh, North Carolina
2 DATE: Monday, February 21, 2022
3 TIME: 10:50 - 11:50 a.m.
4 DOCKET NOS: E-2, Subs 1193 and 1219
5 E-7, Subs 1187, 1213, and 1214
6 G-5, Subs 632 and 634
7 G-9, Subs 722, 781, and 786
8 BEFORE: Chair Charlotte A. Mitchell, Presiding
9 Commissioner ToNola D. Brown-Bland
10 Commissioner Lyons Gray
11 Commissioner Daniel G. Clodfelter
12 Commissioner Kimberly W. Duffley
13 Commissioner Jeffrey A. Hughes
14 Commissioner Floyd B. McKissick, Jr.
15
16

17 IN THE MATTER OF:

18 Duke Energy Carolinas, LLC and
19 Duke Energy Progress, LLC,
20 Public Service Company of
21 North Carolina, Inc., and
22 Piedmont Natural Gas Company, Inc.,
23 Affordability Collaborative Update
24

1 A P P E A R A N C E S:
2
3 FOR DUKE ENERGY CAROLINAS, LLC and
4 DUKE ENERGY PROGRESS, LLC:
5 Kathleen Richard, Esq.
6
7 Kendrick Fentress, Esq.
8 Associate General Counsel
9
10 P R E S E N T E R S:
11 Arnie Richardson
12 Rory McIlmoil
13 Conitsha Barnes
14 La'Meshia Whittington
15 Detrick Clark
16 Thad Culley
17
18
19
20
21
22
23
24

1 CHAIR MITCHELL: Good morning. I'm
2 Charlotte Mitchell, Chair of the Utilities Commission,
3 and with me this morning are Commissioners ToNola D.
4 Brown-Bland, Lyons Gray, Daniel G. Clodfelter,
5 Kimberly W. Duffley, Jeffrey A. Hughes, and Floyd B.
6 McKissick, Jr.

7 We are here this morning to receive updates
8 on the work of the Affordability Collaborative, which
9 was convened by the Commission in its Order Accepting
10 Stipulations, Granting Partial Rate Increase, and
11 Requiring Customer Notice issued on March 31st, 2021,
12 in Docket No. E-7, Subs 1214, 1213, and 1187, as well
13 as its Order Accepting Stipulations, Granting Partial
14 Rate Increase, and Requiring Customer Notice issued on
15 April 16th, 2021, in Docket No. E-2, Subs 1219 and
16 1193.

17 In those orders, the DEC order and the DEP
18 order, the Commission directed DEC and DEP to convene
19 a stakeholder process tasked with addressing
20 affordability, with a timeline for that process,
21 including deadlines for the periodic reporting and
22 filing of recommendations to the Commission. Since
23 the issuance of the DEC and DEP orders, the Commission
24 has issued orders directing the participation of both

1 PSNC as well as Piedmont Natural Gas Company, Inc. in
2 the Affordability Collaborative.

3 In the DEC and DEP orders, the Commission
4 directed the Utilities and the Public Staff to file
5 reports that briefly summarizes the progress made to
6 date within 90 days, and again within 180 days of the
7 date of those orders. On June 4th, 2021, the 90-day
8 report was filed, and then on September 27th, 2021,
9 the 180-day report was filed. It was reported that
10 the Affordability Collaborative held a kickoff meeting
11 on July 29th, 2021, and then a second meeting on
12 September 16th, 2021.

13 Recently, on January 18th of 2022, a
14 quarterly progress report was filed, in which it was
15 reported to the Commission that the Collaborative had
16 met on November 12 and on December 9th of 2021.

17 The quarterly report explains that the
18 participants in the Collaborative have been organized
19 into four Subteams to address the issues outlined by
20 the Commission and the DEC order and the DEP order.
21 The quarterly report identifies each Subteam, as well
22 as the persons named as co-leaders for those Subteams.

23 To further the goal of keeping the
24 Commission apprised of the progress of the

1 Affordability Collaborative, the Commission has
2 requested a briefing today by the co-leaders of each
3 of the four Subteams.

4 Each Subteam will be allowed 10 minutes for
5 its presentation.

6 This session is being transcribed by our
7 court reporter, and the transcript will be filed in
8 these dockets, those dockets in which the reports have
9 also been filed.

10 With that, we will begin with Subteam A. I
11 believe we will hear from Rory McIlmoil as well as
12 Arnie Richardson. Mr. Richardson, I see you on
13 camera, so you may proceed, sir.

14 MR. RICHARDSON: Good morning, everyone. So
15 I am with Duke Energy and co-leading Subteam A with
16 Rory, and I want to give you an update of where we are
17 today. So we have been tasked to prepare an
18 assessment of current affordability challenges facing
19 our residential customers.

20 In the Commission order, there were several
21 different demographics and housing characteristics
22 that we were asked to analyze. This includes race,
23 age, income, housing type, heating source, family
24 size, housing value and location. We did not collect

1 most of this data on our customers, so we didn't have
2 to reach out to a third-party company, Acxiom, to get
3 this customer level information. This is primarily a
4 marketing source of data, so there are some data
5 quality issues, but it did allow us to have a
6 confidence in it to move forward with completing this
7 analysis.

8 I will mention that age is the only thing
9 that we do collect from our customers, so we do know
10 age of the house -- age of the account holder in our
11 billing system. From there, we were asked to segment
12 our customers by different federal poverty levels,
13 which we have done.

14 We also looked at customers above the 150
15 percent FPL, between 150 percent and 200 percent as
16 directed. We also looked at customers above the 200
17 percent level for comparison reasons, and we were
18 fortunate enough that Duke Energy and the Department
19 of Health and Human Services were able to enter a data
20 share agreement to be able to analyze customers
21 receiving assistance for Low-income Energy Assistance
22 Program and crisis intervention program, so we had
23 those customers as a fourth segment.

24 We were asked to look at various trends and

1 patterns on our low-income customers, so we were able
2 to analyze arrears, average energy usage; their
3 average bill, past due amounts; disconnect for
4 non-pays, energy intensity, which is measured by Katha
5 through H (sic) per square foot of the home, as well
6 as we were able to look at different seasonal impacts
7 for our customers.

8 Throughout this process, we have taken an
9 agile approach, so we have delivered three different
10 versions of our analytics after delivering the first
11 version, which was really focused on what was
12 specifically asked for in the Commission order. We
13 asked the Collaborative to help us identify other
14 things that may impact affordability, and we have been
15 doing ongoing analytics in this process.

16 We are getting ready to release a fourth
17 version of the analytics in the coming weeks. This
18 will include things like looking at the disconnect
19 non-pay notifications, electric burden, and mobile
20 homes. We are also doing a statistical analysis that
21 would -- of the descriptive analytics that we have
22 done so we can understand some of the relationships
23 between these variables, these different demographics,
24 and our low-incomes, and hopefully understand

1 affordability even better.

2 When it comes to our final deliverable of an
3 assessment for affordability, we have developed a
4 draft of that with Subteam A, and shared that with the
5 rest of the Collaborative. This is a draft because as
6 we deliver more of the analytics in the coming weeks,
7 we do plan to revise this assessment. But, overall,
8 we received positive feedback from the Collaborative.

9 With that, I'm going to pass it over to Rory
10 to talk a little bit about our initial findings from
11 this assessment.

12 MR. McILMOIL: Thank you. Yes. It's just
13 at kind of a high level. We -- Duke, the DEC/EE
14 analysis found that overall, a little over a quarter
15 of all residents with accounts qualified as low
16 income, meaning being below 200 percent of the federal
17 poverty level with 17 percent falling under -- a
18 combined 17 percent falling under 150 percent of FPL.
19 And for all of those that fall under 200 percent, that
20 amounts to roughly 670,000 residential accounts during
21 the analytical period of 2019 and 2020.

22 Additionally, over 15 percent of all
23 customers met the arrears definition developed by the
24 Company, which is defined as two months spent at

1 double the average bill overdue or six months spent,
2 at least one time behind on their average bill. And
3 it's useful to point out that 60 percent of the
4 customers who were captured by that arrears definition
5 were not low income, and so that just points to the
6 fact that being low income doesn't necessarily mean
7 that -- or not being low income doesn't mean that
8 you're not going to be struggling with being able to
9 pay your electric bill.

10 Additionally, energy intensity or the amount
11 of the -- amount of electricity in Kilowatt hours used
12 per square foot on an annual basis seems to be a
13 driving factor in total energy bills, but also as it
14 relates to arrears and disconnect for non-pay.
15 Low-income households, specifically those lights CIP
16 recipients, as well as arrear-struggling households,
17 have a much higher energy intensity than
18 non-low-income and non-arrears households.

19 As to rural households, the owner customers,
20 customers living in low-value housing or the family
21 households, and also rental households, and that
22 energy intensity factor is likely in part due to
23 inefficient housing, poor insulation, et cetera, as
24 well as inefficient appliances and heating and cooling

1 systems. Seasonal energy intensity is pretty
2 pronounced and drives the higher bills in the winter
3 for the most -- the winter but also the summer, to a
4 lesser extent. And for low-income households and
5 those lights CIP recipients, as well as
6 arrear-struggling households, you definitely see the
7 energy intensity being double or more non-low-income
8 households in the wintertime. Again, likely due to
9 inefficient housing.

10 And, finally, the data show that there are
11 racial disparities in the experience of being in
12 arrears and disconnected for non-pay, but in general,
13 and this is -- well, it's important to point out that
14 the Companies do apply NC Rule 12-11 consistently,
15 regardless of race or status. But, regardless, we are
16 seeing disparities in how African American and
17 Hispanic households experience arrears and disconnects
18 for non-pay that is not explained solely by income, so
19 that's something that we're hoping to learn more about
20 during that deeper statistical analysis. And I
21 believe that is all.

22 CHAIR MITCHELL: Thank you, gentleman. At
23 this point, I will -- I have a few questions for
24 you-all. Then, I'll check in with my colleagues to

1 see if there are any additional questions for you-all.
2 Just trying to scroll down a bit on some of the
3 statistics you-all have provided today, I'm looking in
4 the preview of initial findings box where it says,
5 "two percent of customers rely," CIP customers, and
6 then it goes on to list the percentages that are
7 significant percentages FPL, below FPL.

8 Help me understand sort of that big -- it
9 would seem to me that two percent is low. Two percent
10 of those customers who are receiving light is low
11 relative to those customers that are, you know,
12 significant percentages below FPL. Am I understanding
13 that correctly? Is that really a disparity, because
14 that's how I'm understanding it. If I'm understanding
15 it incorrectly, please let me know.

16 MR. McILMOIL: I mean, I can take first
17 crack at that. So that two percent is -- the way that
18 the customers were accounted for is the Companies
19 worked with the Department of Health and Human
20 Services, Health and Human Services, to identify those
21 customers, but they were looking at a 2021 list of
22 light and CIP recipients. And so they received a list
23 and looked back, backwards to the 2019 to 2020
24 analytical period, and so only customers who were --

1 accompany -- customers that accompany in the 2019 to
2 2020 period that were also still customers and
3 received LAIC CIP assistance in 2021 were captured
4 there, so there is going to be some attrition.

5 Additionally, and correct me if I'm wrong,
6 it only includes customers who received assistance for
7 their electric bill, and so you're likely to also have
8 a number of customers not captured because they might
9 have gone to get -- they might be a Duke Energy
10 customer but went to get assistance, light CIP
11 assistance for non-electric heating, those, and so
12 that's going to be a bare minimum. But, at the same
13 time, overall across the State where we see a
14 situation where the funding runs out very quickly, and
15 so a lot of folks aren't able to get that assistance;
16 that it's only available for a select few number of
17 months of the year, so --

18 CHAIR MITCHELL: Okay.

19 MR. McILMOIL: -- there's no other factors
20 that would come into play. Arnie, anything to add on
21 that?

22 MR. RICHARDSON: The only thing I'll add is
23 that we did do our study on 2019 to 2020 to get those
24 12 months before the pandemic. We did not want to do

1 this analysis while the pandemic was going, so that's
2 a little bit why the timeframes do not work out. We
3 do not usually get a list of customers who got
4 assistance from DHHS. That was a special data share
5 agreement for the purpose of this Collaborative.

6 CHAIR MITCHELL: Okay. So that two percent
7 is actual customers that received assistance?
8 Mr. Richardson.

9 MR. RICHARDSON: Customers that were in our
10 analysis from 2019 to 2020 that received assistance in
11 2020.

12 CHAIR MITCHELL: Okay. Got it. And that
13 covers both utilities?

14 MR. RICHARDSON: Correct.

15 CHAIR MITCHELL: Okay. And then the
16 significant -- going down, same box, preview of
17 initial findings, "significant number of customers
18 meet the arrears definition." How many customers is
19 that? What does "significant number" mean?

20 MR. McILMOIL: I can pull that up real
21 quickly and have it open here. So for the 2019,
22 overall, it was -- sorry. The document's loading.
23 It's about 15 percent overall. 15 percent, which
24 amounted to over 366 -- well, actually, over 360,000

1 total customers, of which 214,000 did not qualify as
2 low income.

3 CHAIR MITCHELL: Okay. Wait a minute.
4 Mr. McIlmoil, say those numbers again. So we're at
5 15 percent, and then you translated that into a
6 natural number of customers?

7 MR. McILMOIL: Yes. It was 300 -- roughly
8 362,000 based on the Company's analysis.

9 CHAIR MITCHELL: 362, and then the 200 and
10 some thousand. Say that number again.

11 MR. McILMOIL: Yes. Of those 362,000, over
12 210,000 did not meet the low-income classification.

13 CHAIR MITCHELL: Okay. Got it. And those
14 numbers, I assume those numbers are -- again, we're
15 looking at DEC and DEP combined?

16 MR. McILMOIL: Yes.

17 CHAIR MITCHELL: Let me see if any of my
18 colleagues have questions for Mr. McIlmoil,
19 Mr. Richardson. Questions? Commissioner Hughes.

20 COMMISSIONER HUGHES: Yeah. I'm encouraged
21 to hear that you were able to get the data sharing so
22 we could look at LIEAP on top of some of your other
23 metrics. I'm curious if you have the date available.

24 Also to look at what you have traditionally

1 called vulnerable customers, that those are the
2 customers that would normally be subject to a
3 moratorium cutoff. Are they in your database and
4 was there any ability to use that or see the
5 overlap between LIEAP in that customer segment?

6 MR. RICHARDSON: I am not aware of how we
7 have declined affordable customers in the past, so
8 that's not something that we have analyzed.

9 COMMISSIONER HUGHES: Okay. Thank you. I
10 think the definition has been expanded in this over
11 Covid, but I think there was -- from what I
12 understand, there was a set definition that was pretty
13 stringent, so I wouldn't expect the number to be very
14 high, but I'd be interested in at least knowing how
15 many customers that is.

16 MR. RICHARDSON: Yeah. It's the same one
17 that Duke Energy has, on more information.

18 COMMISSIONER HUGHES: Thanks.

19 MR. RICHARDSON: Please feel free to speak
20 up.

21 MS. RICHARD: Good morning, Commissioner
22 Hughes. I think what you're asking us is for the
23 customers that would normally qualify for the
24 moratorium based on Rule R12-11, have we done any

1 specific analysis on that subset of customers?

2 COMMISSIONER HUGHES: Yes, just because they
3 weren't subject to disconnections. So when we're
4 looking at kind of number of disconnections, and later
5 on, some of the other metrics, I just was curious how
6 quote "effective" that was or what influence that was
7 having at either generating arrears, possibly, because
8 they're not being disconnected or reducing
9 disconnections.

10 MR. RICHARDSON: No. That's -- we can
11 follow up. I think too, one thing as Arnie mentioned,
12 we have LIEAP consent customers. And the main reason
13 why we have those customers is primarily because we
14 enrolled them in the moratorium that you're
15 mentioning, and so the moratorium would include
16 anybody that, without saying, normally qualify based
17 on R12-11 along with the LIEAP/CIP customers. And we
18 can go in, confirm, and their analysis for just those
19 customers who are not LIEAP/CIP and qualify for the
20 moratorium as any different than what we shared today,
21 and follow back up.

22 COMMISSIONER HUGHES: Yeah. I'd appreciate
23 that, or just, you know, in the next update or next
24 report, just knowing what percentage of your

1 population, since that has been a definition,
2 so-to-speak, in the past of our vulnerable population
3 set. I'm just really curious how big that is and
4 impact --

5 MR. McILMOIL: I think it's vulnerable
6 because the definition may -- it would extend beyond
7 the number of light CIP customers that were captured
8 in the analysis because it also includes -- for the
9 purposes of the moratorium, also includes whether
10 there's elderly or disabled household members, as well
11 as just general, they can demonstrate financial
12 hardship that prevents them from being able to afford
13 their bill or a six-month payment arrangement.

14 COMMISSIONER HUGHES: From what I
15 understand, that's expanded definition, but back in
16 pre-pandemic, it was a pretty narrow definition, and
17 you had to have -- it wasn't an or. It was an and, so
18 I would think that it would be pretty small. But if
19 you have both, I would also love to see what the
20 expanded definition did to those numbers, if that
21 makes sense.

22 MS. RICHARD: Yes, it does. We can pull
23 that information together, and I think what we can
24 share, at a minimum, in our next quarterly update

1 report.

2 CHAIR MITCHELL: Commissioner Gray, did you
3 have question?

4 COMMISSIONER GRAY: No, ma'am.

5 CHAIR MITCHELL: Commissioner McKissick.

6 COMMISSIONER McKISSICK: Thank you, and I
7 appreciate the statistics you have provided there.
8 They're certainly helpful and insightful in analyzing
9 this data. You spoke of energy intensity at one point
10 and you spoke of how it was a factor among low-income
11 families. Could you provide a little bit more insight
12 in terms of what that meant in terms of the analysis
13 of the data that you were reviewing?

14 MR. RICHARDSON: I can take a stab, if you
15 want, Rory. So, again, with energy intensity, we
16 looked at the kWh per square foot that we have for all
17 of our customers, and then we were able to compare
18 that against different FPL levels and different
19 demographics. And what we found was that most, if not
20 all, categories in the demographics, in the housing,
21 saw a higher energy intensity for our lower income
22 customers.

23 So, for every housing type, for owner/renter
24 status, for all the different ages and races and stuff

1 like that, we were seeing a increased energy intensity
2 for low-income customers. That was a very consistent
3 finding.

4 COMMISSIONER McKISSICK: And the follow-up
5 would be this: So they were consuming greater amounts
6 of electricity, regardless of category and type of
7 housing?

8 MR. RICHARDSON: Not necessarily more energy
9 overall --

10 COMMISSIONER McKISSICK: Okay.

11 MR. RICHARDSON: -- but more energy per
12 square foot.

13 COMMISSIONER McKISSICK: More energy per
14 square foot. Okay. Got it.

15 MR. RICHARDSON: It doesn't necessarily mean
16 they had higher, you know, kWh on their bills, but
17 when they brought in the square footage, you see that
18 they use more per square foot, which shows, you know,
19 the overall intensity and how much it takes to get
20 electricity to that home.

21 COMMISSIONER McKISSICK: And the square
22 footage data came from Acxiom. Is that correct?

23 MR. RICHARDSON: Correct.

24 COMMISSIONER McKISSICK: All right.

1 Secondly, you spoke about there being racial
2 disparities and how Black and Hispanic families face
3 cutoffs. What exactly did the data show?

4 MR. McILMOIL: Arnie, I can cover that one,
5 if you'd like.

6 MR. RICHARDSON: Yeah.

7 MR. McILMOIL: So we started with seeing
8 that African American households, for example, that a
9 third of all African American-identified households
10 met Duke Energy's arrears definition. And when we
11 dove down into how that related to income and
12 disconnections for non-pay, we have an additional
13 analysis in our assessment that -- and just to use the
14 African American example, for instance, African
15 American households are 1.6 times more likely to be
16 low income than white households. They are 2.6 times
17 more likely to meet the arrears definition and 3.1
18 times more likely to be disconnected for non-pay.

19 And so when you look at that, especially
20 that increase from the income comparison to the
21 disconnect for non-pay, if they're only 60 percent
22 more likely to be low income, but 210 percent more
23 likely to be disconnected for non-pay, there's
24 something else going on there that's not obviously

1 explained by income, and that we saw the same with --
2 and so you can compare that in American households to
3 Asians and Hispanics as well, and you see, generally,
4 the same trend. And we did the same thing with
5 Hispanic households, and we saw less of a disparity
6 than with African American households, but still a
7 clear disparity that's not explained by it.

8 MR. RICHARDSON: And I'll just add that
9 that's really one of the things we're hoping to get
10 out of the statistical models that we are developing.
11 It will help us understand the correlation between
12 these different variables and hopefully understand why
13 we are seeing that, and what is really driving arrears
14 and disconnects in our lower customer -- low income
15 customer base.

16 COMMISSIONER McKISSICK: Will it be helpful
17 to hear what that analysis reveals as this moves
18 forward? And while it may be statistically
19 verifiable, it may be attributable to factors far
20 beyond what would be obvious.

21 MR. RICHARDSON: Yes. We are very excited
22 for those results as well.

23 COMMISSIONER McKISSICK: Thank you.

24 CHAIR MITCHELL: Commissioner Brown-Bland.

1 COMMISSIONER BROWN-BLAND: Yes. To the
2 extent that you have mentioned that you've taken into
3 account energy intensity, does that account for the
4 customers that use natural gas and propane?

5 MR. RICHARDSON: Yes. We have looked at
6 heating source as well. Right now, that is a separate
7 descriptive variable. So we did look at energy usage,
8 energy intensity, all the other trends around
9 disconnects, and stuff like that on our electric --
10 all electric customers and non-electric customers.

11 The statistical modeling is where we'll
12 really start to see how those different team sources
13 interact with some of the specific demographics
14 housing as well.

15 COMMISSIONER BROWN-BLAND: Thank you.

16 MR. McILMOIL: The analysis did show a
17 higher energy intensity for all electric homes, as you
18 would expect. So for the households served by the
19 companies on the electric side, we're not able to
20 actually see what their full energy intensity is from
21 a BTU, British Thermal Unit, standpoint is.

22 So, you know, just understanding that we
23 have customers who are not all electric, that their
24 total energy burner, their total energy cost and how

1 that relates to their ability to pay the separate
2 bills for electric, non-electric heating sources, is
3 just something that we're not going to be able to
4 capture, but still exist and is impacting people's
5 ability to afford one or both of those bills.

6 CHAIR MITCHELL: Any additional questions
7 for these gentlemen?

8 (No response)

9 CHAIR MITCHELL: All right. Mr. McIlmoil,
10 Mr. Richardson, thank you for your comments today, and
11 we will move next to hear from Subteam B.

12 MS. WHITTINGTON: Thank you. Good morning,
13 Chair Mitchell, Commissioners. I am La'Meshia
14 Whittington, Deputy Director for Advance Carolina, and
15 it is a privilege to appear before you today as a
16 co-lead and representative of Subteam B of the Low
17 Income Affordability Collaborative. And for brevity,
18 I will refer to the Collaborative as LIAC, L-I-A-C,
19 the acronym.

20 Joining me and available to answer any
21 questions the Commission may have is Subteam B co-lead
22 Conitsha Barnes, Energy Policy Management director for
23 Duke Energy. Subteam B consists of 19 LIAC members
24 across nine different organizations representing state

1 agencies, large energy users, non-profit enviromental
2 advocates, and solar industry.

3 The purpose of Subteam B is to develop
4 suggestive metrics or definitions for affordability
5 and to explore trends of affordability. The goal of
6 Subteam B is to position the LIAC to develop suggested
7 metrics or definitions for affordability in the
8 context of the Company's provision of service in
9 its North Carolina service territory, and to explore
10 trends and affordability.

11 As the most efficient means of achieving
12 this goal, Subteam B determined a framework around the
13 Subteam task. These tasks, for clarity, include
14 identifying and compile information to be
15 investigated, a line of questions to be answered;
16 identify any expert input and appearance needed to
17 support LIAC education for our Subteam members;
18 suggest metrics and definition for affordability, and
19 then finally, prepare and present suggestions to the
20 broader LIAC for consideration. Our framework to
21 support these tasks including meeting frequency of
22 once a week for a duration of one hour with a specific
23 timeframe to accomplish each task I have
24 aforementioned.

1 In the spirit of cross-collaboration as
2 co-leads of Subteam B, when we frequently would
3 co-lead with Subteam A, as you previously heard in
4 their conducting of analysis, Duke Energy, state
5 agencies, Public Staff, and of course other
6 organizations to compile the necessary research
7 requested by members of Subteam B to achieve the
8 ultimate goal of developing the suggested metrics for
9 affordability.

10 Now, as charged by the Commission order,
11 Subteam B is to answer the question how is
12 affordability defined and applied to other
13 jurisdictions, particularly for those with similar
14 legal and regulatory frameworks. The research that
15 has been conducted by our team, thus far, has shown
16 that the term affordability has not been broadly
17 defined or applied. Finding that there's no uniformed
18 definition or application of affordability across
19 several jurisdictions, throughout the country, our
20 Subteam has determined to develop a conceptual
21 approach to provide a framework for looking into
22 existing eligibility metrics and creating ways to
23 build upon them.

24 The definition context and application of

1 affordability can vary by factors such as geography,
2 household composition, and a household's ability to
3 withstand bills or unexpected costs. To that end, we
4 are currently exploring metrics for existing utility
5 or state programs designed to address affordability.
6 Understanding the complexity of defining
7 affordability, our team is developing a general
8 concept and framework to present to LIAC. It is
9 important to have a concept for affordability as it
10 will drive how eligibility metrics and program goals
11 are developed and are justified.

12 In order to do this, we begin our initial
13 phase of research understanding energy burden before
14 diving into existing utility and state programs in our
15 analysis. Energy burden is a formula widely used to
16 better understand affordability various for
17 households. Energy burden is the cost of household
18 energy expenditures relative to overall household
19 income, and then this is represented as a percentage,
20 and so energy burden is a commonly used formula.

21 And while we have not, as a subteam,
22 determined yet our goal percentage as the work is
23 ongoing for an affordable energy burden, we understand
24 that a widely accepted threshold for an affordable

1 energy burden is six percent of gross household
2 income. But, again, we have not determined yet our
3 goal percentage as recommendations for LIAC that is
4 under way. We understood in order to evaluate
5 existing programs and to consider gaps and potential
6 shortcomings that are reaching various types of
7 households, it was important to have a formula
8 designed to assess the percentage of financial
9 hardship on low-income ratepayers.

10 Following our research into energy burden
11 with subject matter experts, we then started the next
12 phase of exploring program eligibility requirements
13 for existing low income assistance programs and
14 created an internal matrix to compare the components
15 of each program's program eligibility requirements,
16 this in an effort to help inform the Team's
17 recommendation of quantitative and qualitative low
18 income program eligibility requirements.

19 Programs to date that we have assessed in
20 our internal matrix, and their eligibility
21 requirements, include the Low Income Energy Assistance
22 Program or LIEAP, Crisis Intervention Program, CIP;
23 Housing Opportunities and Prevention of Evictions
24 program, Food and Nutrition Services; State

1 Weatherization, and Heating and Air Repair and
2 Replacement Program; DE Weatherization and Equipment
3 Replacement, and DE Neighborhood Energy Saver.

4 Additionally, we have worked in tandem with
5 the appropriate agencies to answer questions posed
6 weekly by Subteam B members to better understand these
7 existing programs. To date, we have developed an
8 additional internal matrix to analyze now the
9 similarities and differences between the programs I
10 have previously mentioned, and the program
11 eligibility-required criteria so that we can best
12 identify the shortcomings and benefits of each
13 program, and will continue the analysis through the
14 end of this month.

15 In this evaluation, some of the eligibility
16 requirements we've analyzed include application
17 process, discussions of an owner versus renter; income
18 level criteria, specifically federal poverty level,
19 and area of median income. We are still in this phase
20 of analyzing data to inform the qualitative and
21 quantitative low income program eligibility to develop
22 principles and a framework to define affordability in
23 the absence of affordability being applied in other
24 jurisdictions.

1 In the spirit of cross-collaborations,
2 Subteam B aim is to assess existing programs and
3 develop consensus on quantitative and qualitative
4 metrics that can support Subteam C and D and their
5 priority to minimize administrative costs, and
6 streamline a one stop shop application process for
7 customers. Subteam B's documentation of findings are
8 under way, and we expect to brief LIAC on
9 affordability trends in March.

10 And, so, on behalf of Subteam B, I thank you
11 for your time, labor, and attention this morning, and
12 I would like to invite, for my remaining last few
13 minutes, my co-lead Conitsha Barnes to include
14 additional comments as necessary in the completion of
15 this report on behalf of Subteam B. Following her
16 comments, Conitsha and I would be happy to answer any
17 questions the Commission may have.

18 MS. BARNES: Thank you very much, La'Meshia.
19 I think the summary I will just share, as La'Meshia
20 just spoke to, is we've worked diligently with members
21 of Subteam B, which is a very diverse group of
22 individuals with different perspectives to explore
23 across the country, although La'Meshia mentioned
24 programs in North Carolina that we looked at, but

1 we've looked at programs across the country, whether
2 they be state programs and utility programs, to
3 address or assist low-income customers.

4 And consistent with what she shared is we
5 have not, at this point, identified any program that
6 specifically defined affordability or a definition for
7 it. We have identified programs that have put targets
8 in place, whether it be energy burden or other metrics
9 of what they would like to do to address and help
10 low-income customers with energy usage, challenges,
11 and paying their bills. So I then will pause and see
12 if there are any questions.

13 CHAIR MITCHELL: Thank you, Ms. Barnes,
14 Ms. Whittington. I'll check in with my colleagues to
15 see if there are questions. Commissioner Duffley.

16 COMMISSIONER DUFFLEY: I think I heard you
17 state that the group felt that six percent was a
18 proper energy burden. And my question is what percent
19 of Duke ratepayers have a higher than six percent
20 energy burden?

21 MS. BARNES: La'Meshia, you want me to jump
22 in?

23 MS. WHITTINGTON: Sure. And I did want to
24 provide clarity, Conitsha, if you don't mind, as to

1 the second part, clarity. As to Subteam B, we haven't
2 come to a consensus, just to clarify. We understand
3 in our analysis that commonly used -- a metric, to
4 your point, is six percent; and for a higher atlas is
5 10.9 percent. But as far as with Subteam B, we have
6 not come to that consensus on our threshold for
7 recommendations for that percentage. And then I'll
8 turn it over to you, Conitsha.

9 COMMISSIONER DUFFLEY: Thank you for that
10 clarification, but if you would follow up with the
11 percentage above the six percent, please.

12 MS. BARNES: Yes. And Commissioner Duffley,
13 that's information we don't have. I know that some of
14 the analysis we've looked at -- I that Rory and Arnie
15 mentioned energy intensity, but we also have had some
16 conversations based on analysis, energy burden, so
17 that's something that we can follow up with.

18 And I think to La'Meshia's point is
19 depending on the program, whether it's a state program
20 or utility program, if there is a target energy
21 burden, it does vary. But we will look based on the
22 analysis that's been completed for the customers. The
23 low-income customers that we've been talking through,
24 we can look and determine what is that energy burden

1 and provide that information back to you-all.

2 COMMISSIONER DUFFLEY: Thank you.

3 MR. McILMOIL: And Arnie can correct me if
4 I'm wrong. Sorry. This is Rory McIlmoil. Energy
5 burden, I believe, is going to be part of the next
6 round of the analysis.

7 MR. RICHARDSON: Yeah, that is mostly
8 correct. We do plan on releasing the electric burden
9 because we do not have the full energy cost, but we do
10 plan on releasing some electric burden information.

11 CHAIR MITCHELL: Commissioner McKissick.

12 COMMISSIONER McKISSICK: Perhaps that last
13 follow-up response was going to address a question I
14 had. When you said six percent, whether you were
15 looking at the totality of utilities, you know,
16 including water, sewer, and natural gas, or a family,
17 but it sounds like what you're trying to get to is a
18 percentage based upon electric uses. Is that what I'm
19 to understand?

20 MS. WHITTINGTON: That's correct,
21 Commissioner McKissick.

22 COMMISSIONER McKISSICK: Okay.

23 MS. WHITTINGTON: That's correct.

24 COMMISSIONER McKISSICK: That provides the

1 clarity I was looking for. Thank you.

2 MS. BARNES: And Commissioner McKissick,
3 just as a follow-up to that, and I know that Rory and
4 Arnie had actually had shared some information about
5 energy intensity, but just as a reminder, the analysis
6 that we are looking at as part of what the Commission
7 has approved for, Duke Energy Carolinas and Duke
8 Energy Progress is specific to electric, recognizing
9 that even in the most recent rate cases for Piedmont
10 Natural Gas and Public Service of North Carolina, they
11 have joined the Collaborative to participate, listen,
12 and learn, but we are -- we have not -- this -- the
13 original will not include gas analysis. I think those
14 utilities will be determining if and what type of
15 Collaborative or how they would do an analysis of gas,
16 but the work they were doing for the LIAC is specific
17 to electric usage only.

18 COMMISSIONER McKISSICK: Thank you. I
19 appreciate that clarity.

20 CHAIR MITCHELL: Commissioner Hughes.

21 COMMISSIONER HUGHES: Just one more question
22 related to this same topic. Do you feel -- and I'm
23 not sure who this would be a question for. Do you
24 have enough data to know what the heating source is

1 reliably? I mean, I see that you have that and a lot
2 of your analysis so that down the road, if you did
3 want to look at energy burden of electricity, you
4 would at least be able to look at the energy burden
5 for people that use all electric versus the energy
6 burden of someone that, say, would use gas heat or gas
7 modern heat.

8 And I'd be curious, just last question, if
9 other -- because I think part of it is you're already
10 looking at other jurisdictions. I would think that,
11 especially in the southeast, this is a common
12 challenge with kind of the gas, electric mix.

13 Have you found anyone that has sort of
14 tackled this affordability definition question when
15 you do have a lot of people that rely on gas so that
16 the data by itself is not particularly comprehensive?

17 MR. RICHARDSON: I can jump in here, if no
18 one else minds. So great question. I wouldn't say
19 that we have perfect data on team source, and DEC, we
20 do have two different rates, right. One for all
21 electric homes, one for non-all-electric homes, which
22 we have pretty good confidence in. DEP does not have
23 that rate difference, so there is some opportunity
24 there. But in this new analytics group that we're

1 standing up in our rates department, under Ron Huber,
2 (phonetic) we are trying to do some additional
3 analytics on identifying heat source based on usage
4 and temperature, and stuff like that. So, hopefully,
5 we can improve this data source in the future.

6 MR. McILMOIL: In addition to that, the
7 analysis on heating source only captured the primary
8 heating source for 83 percent of customers, given what
9 I assume are deficient -- or just the inability to
10 catch that other 17 percent through the Acxiom data,
11 but that is -- you know, that's another 300,000 plus
12 households that just kind of complicates the ability
13 to achieve that full home energy cost burden, although
14 there are other data sources on the census track
15 level, Federal estimates on the census track level
16 that have captured, attempted to capture that.

17 COMMISSIONER HUGHES: Just standing on a
18 personal note, I know I'm part of the problem. I have
19 dual fuel at my house, so I can actually have electric
20 heat or gas heat, so I understand you're never going
21 to kind of quite get it, get it perfect, but, you
22 know, just moving toward it. Because when I try to
23 look at metrics with my home versus anything that Duke
24 presents, it's always very difficult to make any

1 comparisons because sometimes, I'll use electric heat
2 during a month, and sometimes, I use gas heat. It
3 depends on the actual temperature on a day by day. So
4 I don't know how many people are like me, but I know I
5 would be hard to analyze.

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

8 (No response)

9 CHAIR MITCHELL: Well, thank you Subteam B.
10 Let's move now to Subteam C.

11 MR. CLARK: Good morning, Commissioners. My
12 name is Detrick Clark and I'm the director of Housing
13 and Energy Programs at the North Carolina Community
14 Action Association, and I co-lead Subteam C with my
15 friend and colleague Ken Szymanski. Ken and I are
16 both honored and humbled to be a part of the LIAC, and
17 we work with Subteam C as we investigate the strengths
18 and weaknesses of existing rates, rate design, billing
19 practices, customers assistance programs, and energy
20 efficient affordability programs.

21 I am pleased to be before you today to share
22 our progress. Over the past several months, Subteam C
23 has embarked on a journey to work towards an organized
24 and unified response to the Commissioners' orders.

1 Many of the topics we have explored have been very
2 complex. Over the past few months, our Subteam
3 members have had good progress as we have learned
4 about cost of service, cost causation; rate design,
5 consumer consumption patterns; current statutory and
6 regulatory policies, and the pros and the cons of
7 minimal bill charges and fixed charges. Residential
8 rate class settlements, sedimentation; percentage of
9 income programs, as well as this and Duke EE programs.

10 Our Subteam C has gained better
11 understanding of the Duke Energy low-income energy
12 efficient offerings in the Carolinas, particularly the
13 Weatherization and Equipment Replacement Program, the
14 Refrigerator Replacement Program, Neighborhood Energy
15 Saver Program, and the Low-income Weatherization Pay
16 for Performance Power in Buncombe County, which I hope
17 help to spark both dialog and ideas amongst Subteam
18 members, and our team looks for new ideas and ways to
19 address energy affordability for low-income families.

20 Our team is currently exploring potential
21 program expansion and innovative pilot program ideas,
22 which include expanding the Duke Energy Carolinas
23 Weatherization Program, as well as the energy burden
24 pilot, the heat strip replacement pilot, and the

1 Multi-family Direct Install expansion.

2 In a serious effort to effectively and
3 thoughtfully address the orders raised by the
4 Commission, Ken and I have created five distinctive
5 working -- many working groups to focus on key
6 requests from the Commission, and those working groups
7 include success measures and impact -- program impact,
8 existing EE programs and energy burden; statutory and
9 regulatory rates and cost causation, and the DNP and
10 disconnect working groups.

11 The success measure and program impact
12 working group is focused on identifying success
13 criteria and key impact metrics that are most
14 important in engaging the success and impact on
15 low-income programs. Ultimately, the success measures
16 working will provide a list of impact measures and
17 program recommendations to Subteam C for discussion
18 and overall consideration to the larger LIAC.

19 The EE programs and energy burden working
20 group is tasked with working with Duke to provide
21 Subteam C with a comprehensive self-assessment of
22 their existing programs. We're hoping to finalize the
23 details of that request soon, and the statutory and
24 regulatory working group is tasked with reviewing the

1 statutory and regulatory appropriateness of
2 implementing minimum bill concepts, PICK,
3 sedimentation of existing rate class, and expanding
4 DEC's current program to DEP. We expect a first draft
5 from that group later this week. The rates and cost
6 causation working group is aimed at providing Subteam
7 C members with recommendations on cost causation and
8 how cost of service allocations affect rate design and
9 overall affordability.

10 And, lastly, the DNP and disconnect working
11 group is tasked with providing Subteam C members with
12 direction on determining what practices and regulatory
13 provisions related to disconnections should be
14 modified and/or revised. As you've heard, many of our
15 working groups have started to develop preliminary
16 drafts of their recommendations, so we expect to begin
17 reviewing and finalizing those recommendations over
18 the course of the next few weeks.

19 As these many working groups and there are
20 their findings and recommendations, Ken and I will
21 assemble Subteam C members together to discuss these
22 proposals, targeting deadlines, and next steps. This
23 concludes the updates for Subteam C, and I want to
24 thank the Commissioners for an opportunity to

1 provide -- share our progress thus far.

2 CHAIR MITCHELL: Thank you, Mr. Clark. Let
3 me check in and see if there are any questions for
4 Mr. Clark? Commissioner Hughes.

5 COMMISSIONER HUGHES: Thank you very much
6 for that update. As I look down the list, it seems
7 like you've done a great job of capturing the wide
8 breath of programs that are offered. There's one
9 subset that I think come up a lot, at least in our
10 discussions and some of what we've heard from Duke
11 that I don't see here that maybe you could comment on,
12 and that's the collection method approaches, not
13 billing. Excuse me, not collection as in trying to
14 collect from someone that hasn't paid, but more
15 billing.

16 Particularly, things like your budget
17 billing program and your prepaid program, which I
18 don't see them fitting on this list, but I think
19 they're often presented to us as an effective, at
20 least, way of ameliorating cash flow problems, bill
21 spikes and certain months, and it has just really
22 intrigued me as, I think, the penetration for those
23 programs have gotten fairly high or is getting higher
24 every year.

1 Where do they fit into this equation, both
2 as a solution but also as a Duke -- you know, are they
3 impacting some of the data that we're already seeing?
4 So it's a long-winded question I can clarify.

5 MR. CLARK: Um, I guess in terms of -- what
6 we've done is we're working with Duke now to assess --
7 you know, kind of give a self-assessment of all of
8 those -- their specific programs. We feel they are,
9 of course, in the best position to provide this group
10 with information. So we are in the process of looking
11 at, you know, all of those different programs, but we
12 don't have any information, you know, related to that
13 to date.

14 COMMISSIONER HUGHES: Okay. And I realize
15 it's probably more of a question for Duke, but
16 hopefully that's coming or part of it?

17 MS. BARNES: I'll be glad to jump in,
18 Detrick, just to provide some additional information.
19 So, Commissioner Hughes, great question. One of the
20 things that you'll see is the programs that Detrick
21 has mentioned here have been truly programs that have
22 been income-qualified, so programs that we know are
23 specifically qualified -- excuse me, designed to help
24 customers that are low-income.

1 You've mentioned some great other programs,
2 which are billing options that are not necessarily
3 income-qualified, but they could level as the
4 customer's bill -- where they can pay, you know, the
5 same amount for a certain amount of months, as you
6 mentioned budget billing.

7 So because they were income-qualified, we
8 just haven't done that deep level of analysis. I
9 think the other program that you mentioned as the DEC
10 prepaid program, you know, as a reminder, that program
11 just rolled out late last, I think, fall is the
12 timeframe. The participation right now is pretty low,
13 so we don't have what I would say, even statistically,
14 valid data maybe to make conclusions on that program,
15 but we can continue just to look at that just to see
16 if there are any potential gaps in the data for future
17 consideration as we will consider Duke's work with
18 Subteam C.

19 COMMISSIONER HUGHES: Thank you, and I
20 appreciate that. Maybe prepay isn't something to look
21 at, but the budget bill, it just has -- budget billing
22 has come up a lot. I think Duke has been advocating
23 for it quite a bit. And, also, I think it falls kind
24 of interestingly in the middle of both the

1 income-qualified programs and the rate structure
2 program because I think budget billing would send less
3 pricing signals to customers than customers that don't
4 participate in budget billing.

5 So if you're talking about changing rate
6 structures to send pricing signals to customers or
7 relieving customers of certain payment, it would seem
8 to be diluted if the actual payment wasn't really or
9 was based on budget billing as much as it was based on
10 the use and consumption during a particular month, so
11 just things that I personally have been really curious
12 about. And if they come up, great. Just some
13 thoughts. Thank you.

14 MS. BARNES: Thank you. Great point. So,
15 like I said, we'll consider that as we continue to do
16 the analysis work under Subteam C.

17 CHAIR MITCHELL: Any additional questions on
18 the Subteam C effort?

19 (No response)

20 CHAIR MITCHELL: Thank you-all. Let's move
21 on then to Subteam D.

22 MR. CULLEY: Hi. Good morning, Chair
23 Mitchell, Commissioners. I am Thad Culley, Senior
24 Manager of Public Policy for Sunrun, and greatly

1 appreciate the opportunity to be before you today as a
2 co-chair and representative of Subteam D.

3 Naturally, the affordability of energy rates
4 is a constant consideration in the minds of state
5 lawyers across the full range of ongoing working
6 groups. The purpose of Subteam D, however, is to
7 support the Commission's directive relating to the
8 engagement for a nation among the three specific
9 Collaboratives, and that is the Energy Efficiency
10 Collaborative, LIAC, and the ongoing Comprehensive
11 Rate Review, which I'll refer to as CRR.

12 So to the extent there are complementary
13 work flows occurring within each of these efforts, the
14 goal of Subteam B is to raise visibility among the
15 several Collaboratives of what is happening in each,
16 and to gather and to disseminate feedback on what
17 steps could be taken to address gaps, develop
18 solutions, and avoid duplication of work. And to this
19 end, Subteam D planned an initial joint Collaborative
20 meeting with all three groups.

21 While we began planning this in early
22 December, you know, we had a session on January 26.
23 And I want to pause here and recognize the work flow
24 of our co-chair, Paula Hemmer, who's the Senior

1 Engineer at the NC State Energy Office, who really
2 kind of took the laboring core of organizing the
3 agenda and the meeting format, so lots of kudos and
4 praise for her work.

5 I'm pleased to report back that this joint
6 Collaborative meeting was well-attended and I think,
7 indeed, did provide valuable feedback to all of the
8 Subteams about their ongoing work. In total, we
9 hosted about 147 participants and focused the session
10 on providing like a general overview of the objectives
11 and current work of each of these three
12 Collaboratives. Each Collaborative was given a
13 30-minute time window to give a presentation and to
14 provide an update on their respective work and kind of
15 ongoing work streams.

16 The meeting then shifted to a smaller group
17 breakout via virtual breakout rooms where the
18 facilitators factored in of those participants around
19 the areas that are sectioned between these
20 Collaboratives. Participants were asked to reflect on
21 presentations and share their impressions based on
22 that, on the gaps and opportunities that were made, as
23 well as potential solutions to affordability issues
24 that they wanted to highlight for this now convened

1 broader group.

2 While -- by the end of that breakout
3 session, I think we had accumulated several dozen
4 comments identifying overlapping gaps and
5 opportunities, and at least 19, I think, overlapping
6 solution areas. And so with the caveat, this is not
7 going to be an exhaustive list or ranked in any order
8 of importance. I wanted to provide just a small
9 sampling of some of the feedback we received.

10 On gaps and opportunities, we had the
11 stakeholders, you know, raise some of the following
12 questions, like how do we frame customer challenges
13 for affordability. As one stakeholder observed a
14 one-size-fits-all approach, it's really hard to match
15 with the individual challenges and circumstances that
16 customers with high energy burden may be facing.

17 You know, how do we get access to
18 hard-to-reach customers? How do we streamline the
19 process with program enrollment or assistance to make
20 it quick and easy from the customers' perspective? I
21 think this was a common theme throughout. How do we
22 balance utility administrative costs and program
23 delivery to maximize the benefit to customers? How do
24 we secure durable, sustainable funding streams to pay

1 for these programs, including potential programs like
2 the percentage of income payment plan?

3 Now on the solution side, at least one
4 stakeholder noted that, you know, we need to improve,
5 expand and better integrate existing customer
6 offerings to make sure they're reaching more people,
7 and this would include, among the sweep of energy
8 efficiency programs, available rate designs, and other
9 policies. I think it's a view that we need to have
10 support for longer term solutions on these fronts with
11 energy efficiency, like helping home funds and ongoing
12 financing programs.

13 Administratively, one stakeholder suggested
14 we should streamline and create a one stop shop for a
15 client for assistance and services, make sure that
16 complimentary programs are just that, that they're
17 added to existing resources. Pre data sharing with
18 other administrator agencies to coordinate better
19 coordinated systems, and then consider auto-enrollment
20 based on receipt with customers of other types of
21 government support.

22 And I'm going to kind of cut this short
23 here, but based on this feedback, LIAC has identified
24 cross-collaborative liaisons for the work going

1 forward, and this includes representatives from Duke,
2 Public Staff, and the other organizations represented
3 within our Collaborative. Now, these liaisons are
4 going to be tasked with sharing updates with the other
5 Collaboratives, in the EE and CRR Collaboratives, from
6 any of the relevant, you know, LIAC work products that
7 are coming to fruition now, and to report back to LIAC
8 on any notable updates for those other groups.

9 Starting with the next line workshop, there
10 will be a standing agenda item to give space for these
11 liaisons to provide updates as needed. And,
12 additionally, I note that CRR and LIAC Collaboratives
13 have made a public portal page where Collaborative
14 meeting material will be posted for public access.

15 And, finally, I want to note that our hope
16 with Subteam D is to recognize the importance of
17 cross-collaborative dialog as their opportunities to
18 leverage and optimize the work with stakeholders
19 across these many Collaboratives. We do this with a
20 sensitivity that's a significant time commitment the
21 stakeholders are making, and, you know, the core goal
22 going forward is to streamline the channels of
23 communication while preserving opportunities to
24 participate in transparency for the stakeholders that,

1 you know, have both the interest and the ability to
2 engage.

3 So, again, on behalf of Subteam D, I thank
4 you for your time this morning and I'm happy to answer
5 any questions that you have.

6 CHAIR MITCHELL: Thank you, Mr. Culley. Let
7 me check in with Commissioners to see if there are
8 questions related to Subteam D work.

9 (No response)

10 CHAIR MITCHELL: It looks like, Mr. Culley,
11 there are no questions for you, but I will say I heard
12 some interesting things in your remarks this morning.
13 I'm looking forward to see and hear more from you-all
14 and appreciate your updating us today. Anything else
15 from Duke or from any of the participants in the
16 Affordability Collaborative effort?

17 (No response)

18 CHAIR MITCHELL: Let me check in with the
19 Commissioners one last time to see if there are
20 questions.

21 COMMISSIONER HUGHES: Thank you. It's
22 really encouraging to see all the great work you're
23 doing, and I really appreciate it.

24 CHAIR MITCHELL: And just following up on

1 Mr. Culley's point about investment of time and
2 resources, Commission recognizes the work, time, and
3 effort that's going into this and looks forward to the
4 end result. I appreciate everyone's hard work here.
5 With that, we will sign off. Thank you very much,
6 everybody.

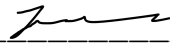
7 (The proceedings were adjourned)

8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

C E R T I F I C A T E

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



Tonja Vines