PLACE: Dobbs Building
Raleigh, North Carolina
DATE: November 8, 2017
DOCKET NO.: EC-23, Sub 50
TIME IN SESSION: 2:00 P.M. TO 5:00 P.M.
BEFORE: Chairman Edward S. Finley, Jr., Presiding
Commissioner Bryan E. Beatty
Commissioner ToNola D. Brown-Bland
Commissioner Jerry C. Dockham
Commissioner James G. Patterson
Commissioner Daniel G. Clodfelter

IN THE MATTER OF:
Blue Ridge Electric Membership Corporation,
Petitioner
v.

Charter Communications Properties, LLC
Respondent

Volume 2

NORTH CAROLINA UTILITIES COMMISSION

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> TABLEOECONTENTS

EXAMINATION

## LEE LAYTON

Continued Redirect Examination by Ms. Harden..... 6
Examination by Commissioner Clodfelter........... 8
Examination by Chairman Finley.................. 17
Examination by Commissioner Brown-Bland.......... 22
Examination by Chairman Finley.................... 25
Examination by Commissioner Clodfelter.......... 26
Examination by Mr. George........................... 28
Examination by Ms. Harden.......................... 34

WILFRED ARNETT
Direct Examination by Ms. Harden.................. 39
Cross Examination by Mr. Gillespie............... 131


PROCEEDINGS
CHAIRMAN FINLEY: Now we're'ready. MS. HARDEN: Thank you, Chairman Finley. LEE LAYTON; having previously been sworn, testified as follows:

CONTINUED REDIRECT EXAMINATION BY MS. HARDEN: BY MS. HARDEN:

Q Mr. Layton, you'll recall that Mr. George asked you before lunch if the National Electric Safety Code permitted a utility like Blue Ridge to attach street lights in the communication worker's safety zone; do you remember that?

A Yes.
Q Even though it's permitted, does Blue Ridge attach street lights in the communication worker's safety zone?

A Well, normally we're in the electric space which is the top eight and a half feet of the pole, and generally right beside the transformer. If not there, we would generally -- much further down the pole. We could be in a communication space occasionally but it's rare that we'd be there unless -- and let's just say unless they were jammed up against the transformer.

Q Mr. Layton, are you a professional engineer?
A Yes.
Q And how many other, including yourself, how many professional engineers does Blue Ridge Electric employee today?

A Blue Ridge has three professional engineers on staff.

Q And how many employees does Blue Ridge employ?
A A total of 160 employees.
Q I'd like to show you one more thing.
MS. HARDEN: I apologize to the Commission and to the witness, when we put up Lee Layton Exhibit $16 E$ and then we referred to another document, I failed to mark it. I would like to mark this as P1, as Petitioner's Exhibit for hearing, and I would just like to ask him Mr. Layton if he could identify Pl? A Yes. This is the same picture that's shown in the previous LL-16E. It's just showing a different perspective but the same photo.

BY MS. HARDEN:
Q Who took that photo?
A I took that recently.
Q And is it a true and accurate depiction of the pole?

A Yes. It shows our conduits on this side of the pole. It shows the Charter equipment on the other side of the pole.

CHAIRMAN FINLEY: We'll mark this picture here of the telephone pole as - electrical pole I guess it is - as Petitioner's Exhibit Number 2 -Number 1.
(WHEREUPON, Petitioner's Exhibit
Number 1 marked for identification.)

MS. HARDEN: And, Chairman Finley, we have -- I have finished my redirect and would move that into evidence at this time, if the Commission would so receive.

CHAIRMAN FINLEY: Without objection, we will receive that. And, without objection, we'll receive Mr. Layton's exhibits that have already been marked for identification.
(WHEREUPON, Petitioner's Exhibit Number 1 was admitted into evidence.)

MS. HARDEN: Thank you, sir.
CHAIRMAN FINLEY: Questions by the

EXAMINATION BY COMMISSIONER CLODFELTER:
Q Mr. Layton, good afternoon.
A Yes, sir.
Anywhere in Blue Ridge's service territory does Blue Ridge currently offer to customers any services or products that compete with those of Charter?

A Not that we're aware of. Blue Ridge does have a subsidiary, RidgeLink that leases dark fiber, this is excess fiber capacity we have in our system to operate our system. We use fiber to operate our substation that's controlled -- to send control signals, automatic meter reading processes over our fiber. And some of the excess fiber that's there we lease through a subsidiary to third parties, but it's dark fiber, it's not lit fiber. The distinction is that's generally used by kind of the middle mile from company to company.

Q Okay. You're not offering services to retail customers video programming or data services?

A No. No programming. No lit services at all.
Q Thank you. Mr. Layton, would -- do you have in front of you your direct testimony? I don't know
which notebook that's in because you've got several.

A
Direct --
Q Whichever one that has your direct testimony. Do you have that?

A Yes, sir.
Q On page 9, please, sir.
A Tab one or the --
Q It's the testimony itself.
A The testimony itself. Page 9.
Q And beginning on line 3, the sentence says, the rates under both agreements, the 2003 agreement and the 2008 agreement were established as a result of negotiations between Blue Ridge and Charter. As I understand your testimony, you were involved in those negotiations.

A The 2008. I was not there in 2003.
Q 2008, I'm sorry. Thank you for correcting me. I'm really focusing on the 2008 negotiation.

A Yes, sir.
Q Was there anyone more actively involved for Blue Ridge than yourself?

A Yes, sir, Brad Shields was the primary person, and he was actually taking the lead. He is a
employee of Blue Ridge. He would just consult with me so $I$ was not in the negotiations. He was actually talking to them or communicating with them.

Q Were you generally aware of what Mr. Shields was doing in those negotiations? Did he talk with you about it?

A Yes.
Q And did he keep you informed about the negotiations?

A Yes.
Q So would you consider yourself reasonably well informed about what Mr. Shields was actually doing in those negotiations?

A I believe so, yes.
Q But you might not know everything?
A That's correct.
Q Okay. My question really is this: In the course of those negotiations, when Blue Ridge was developing its own negotiating position for what the rate it wanted to charge would be, and then either at that point or at the point where it finally decided what rate it would be willing to accept in the final agreement, was any modeling
done using any methodology to calculate the negotiating position rate or the final accepted rate?

A In the 2008 --
Q 2008, yes, sir.
A No, sir, it was really just a continuation of the 2003 agreement. The 2003 agreement had been escalated up based on CPI adjustments, so I think it was just a continuation of that.

Q So there was no modeling of any -- using any cost allocation methodology --

A No.
Q -- in the course of those negotiations?
A No.
Q Well, I know you testified in 2003 you were not involved, but do you know whether in the 2003 negotiations there was any modeling done by Blue Ridge using any methodology to allocate the costs for the pole attachment?

A My understanding is that it was not, it was just a negotiated rate. It was kind of a market rate of what we were seeing elsewhere.

Q And your understanding comes from what source?
A Just in talking to Brad and to other employees
and looking at some of the documents that we had. I didn't see anything that showed any modeling at that point.

Q And we're referring now to the 2003 negotiations. You were talking to Mr. Shields about those negotiations?

A Yes.
Q Okay, You were asked on redirect some questions about Exhibit 13, which is titled Joint Use Attachment Specifications.

A Yes.
Q And if I understood your testimony correctly, I understood you to testify that those specifications were incorporated and part of the 2008 agreement with Charter. Did I understand you correctly?

A I think our agreement says they will comply with our specifications. It didn't specifically mention this document. It was a general term.

Q Thank you. I want to be sure I understand exactly what you said. Now, with that in mind, can you look at Exhibit 3 and tell me what provision in Exhibit 3 requires Charter to comply with those specifications? Just -- I'm just
looking to locate it. It's a very long exhibit and I figure --

A Yes.
Q -- you may --
A Well -- and I don't know if I can do quickly but I'll see what I can do.

Q Okay.
MS. HARDEN: Would it be acceptable for
someone to assist to move this along?
COMMISSIONER CLODFELTER: Absolutely.
MS. HARDEN: May I suggest you look at 3.1.
A Well, $I$ was looking back in the specifications. Let me go over there.

MS. HARDEN: And 3.2.
A Yes. Okay, 3.1 I think, Commissioner Clodfelter, addresses what you're talking about. Do you see that on page 3 of the agreement?

BY COMMISSIONER CLODFELTER:
Q I do and let me ask you about that. It says that the attachments shall be placed to maintain in accordance with the requirements, specifications, rules and regulations of the NESC. And that's not your Exhibit 13?

A No. Keep going though, it would be --

NORTH CAROLINA UTILITIES COMMISSION

Q Any governing authority having jurisdiction --
A $\quad--$ and in $C$--
Q -- C this agreement including the rules and practices of owner for attachments as set forth in Exhibit B.

A B. And then did we say another one, too. We can look at -- I was looking at Exhibit B.

MS. HARDEN: 3.2.
A Three point --
MS. HARDEN: Two.
BY COMMISSIONER CLODFELTER:
Q Okay. Again --
A The rule --
Q -- let's stay with 3.1 for a minute because $I$ was comparing Exhibit $B$ to your Exhibit 13 and they didn't seem to be the same so that's really what's prompting --

A Well, and there could be some conflicts in that those specifications for 2006 --

Q Yes, sir.
A $\quad--$ and just 2008 , so there could be some changes that were incorporated here that were not in there.

Q Thank you. And I interrupted you, you were going NORTH CAROLINA UTILITIES COMMISSION
to talk to me about 3.2.
Well, I think 3.2 just said these rules may be changed by the owners from time to time. So I think we're saying these standards that are in Exhibit 13, or whatever it is, were part of this. I'm not sure that's clear enough for what you're asking but --

Well, we referenced the 3.2 , do you know if Blue Ridge ever gave written notification to Charter that the joint use specifications in Exhibit 13 were going to go into effect for Charter?

A They were notified because we had a meeting with the joint users and they were there, and that was before the 2008 agreement.

Q Were you at the meeting?
A No, sir, 2006. I was aware it was going on but I was not there.

Q And -- but you were informed from some source that Charter attended that meeting?

A Yes.
Q What's the source of that information?
A I think several -- I've talked to several of our staking engineers, the layout techs who are out in the field, and they commented on Charter being
there because I asked them who was at the meeting.

Q That meeting was in 2003?
A No, that was in 2006.
Q 2006, before the 2008 agreement?
A Yes.
COMMISSIONER CLODFELTER: That's all I have.
CHAIRMAN FINLEY: I have a few questions.
EXAMINATION BY CHAIRMAN FINLEY:
Q Mr. Layton, the National Electric Safety Code, as
I understand it, requires 40 inches of safety space below the neutral to the point where the attacher attaches; is that right?

A Yes, sir.
(Because of the proprietary nature of the following testimony, it is filed under seal.)








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(Testimony on the open record resumed.)

BY MR. GEORGE:
Q Now, Chairman Finley asked you a few questions about the RUS requirement and you mentioned the eight and a half feet that -- I think your words were "should be reserved for electrical supply space". What RUS requirement are you referencing?

A It would be the construction standards. I think it would be CFR 1728804 I believe is the number.

Q Can you say that a little slower?
A Maybe. I've rattled off a lot of numbers today.
I think 1728 E-804 I believe is the correct reference.

Q And you didn't mention this RUS requirement in your direct testimony or in your rebuttal testimony, did you?

A I don't recall mentioning it.
Q And you never cited $1728 \mathrm{~F}-804$, did you?
A I don't recall.

Q Well, if we looked in your direct and we looked in your rebuttal and it wasn't there --

A Then it wasn't there.
Q And it wasn't there. And Blue Ridge did not produce a copy of this in discovery, did it?

MS. HARDEN: Objection. A copy of what?
MR. GEORGE: RUS bulletin 1728 F-804.
A I thought we did in the -- one of the documents that was asked for.

BY MR. GEORGE:
Q But you don't know that Blue Ridge produced it?
A Well, I can't -- I can't recall everything. I had a copy of it with the intent of doing it. I don't know if it was submitted or not.

Q So when did you learn of this RUS requirement?
A Thirty years ago, I don't -- it's been forever.
Q And what exactly does the requirement say?
A I don't remember the exact words. It's just that the top eight and a half feet of the pole are for the electric supply, and it's in our Joint Use Agreement so we see it there a lot.

Q But that requirement is not in the Exhibit 3 --
A No.
Q -- the 2008 agreement with Charter, is it?

A No, but it came from the RUS standards.
Q But that's not in the 2008 agreement? That eight and a half foot requirement is not in the 2008 agreement?
(Because of the proprietary nature of the following testimony, it is filed under seal.)



(Testimony on the open record resumed.)

MR. GEORGE: Over the break we were able to get a copy of $1728 \mathrm{~F}-804$, and $I$ apologize we just have one copy. If I may approach the witness I'll have him inspect it.

BY MR. GEORGE:
Q Mr. Layton, if you could just flip through that and let me know if that appears to be a true and accurate copy of the guide -- the RUS guidelines you were referencing.

A Yes.

Q And can you tell me where in that document there's a requirement for eight and a half feet?

A I haven't looked in a long time at that so I don't know. No, I can't tell you. It's -- I have not looked at this in a long time.

Q So you don't recall where in that document there would be an eight and a half foot requirement?

A I do not recall where it is in the document.
Q Now, Blue Ridge has allowed Charter and joint users and other attachers to its poles to attach within 40 inches of the neutral, right?

A Yes.
Q And it's allowed that for decades.
A Yes, sir.
Q In fact, in some cases you testified that Blue Ridge gives permission today to attach 40 inches below the neutral, right?

A That Blue Ridge gives permission to attach -- if we're asked and we think we can accommodate that, if we know it's a pole that we don't -- we'll likely never be adding equipment to then we would likely give permission to do that.

Q So you have given permission to do --
A Yes.

Q And so then Blue Ridge has allowed attachers to the pole to attach within 40 inches of neutral. And when it's given permission to do that today, Blue Ridge is not violating any RUS requirement, is it?

A No.
MR. GEORGE: No further questions, Your
Honor.
MS. HARDEN: May I ask a few clarifying? . CHAIRMAN FINLEY: Yes, ma'am.

EXAMINATION BY MS. HARDEN:
Q Commissioner Clodfelter asked you about RidgeLink and I just want to make sure we're clear on the record. Does RidgeLink offer anything other than dark fiber to others?

A No.
Q Does RidgeLink compete with Charter?
A To the best of my knowledge they do not install any dark fiber so, no. I mean, they install it, they do not lease dark fiber to others.

Q Let me ask it better. Does RidgeLink provide any service to retail customers?

A No.
Q You mentioned in response $I$ believe to

Commissioner Clodfelter's questions that Brad Shields was the primary negotiator in 2003 and 2008; is that right?

A Yes.
Q And he asked you if the rates were negotiated?
A Yes.
Q What experience does Mr. Shields have in the negotiation of pole attachment rates for Blue Ridge and its subsidiary, Ridgeland?

A I'm sorry. Say that again. I'm getting tired.
Q I'm sorry. Does Brad Shields negotiate pole attachment agreements for RidgeLink when it is attaching outside of Blue Ridge's territory and putting up fiber itself?

A Yes. We -- RidgeLink installs fiber outside of our territory, also, including over into Virginia. So, yes, he has to negotiate attachment agreements with others in other areas. And does Mr. Shields have any knowledge about what rates are paid by RidgeLink to others for the attachment of fiber outside of Blue Ridge's territory?

A Yes. And I've asked him what RidgeLink is paying elsewhere when he's not attaching -- well, he
doesn't attach on the Blue Ridge system. That's our -- but when he does have joint pole attachment agreements elsewhere and it's been everywhere from a $\$ 5$ rate to a $\$ 30$ rate that we're paying.

Q And this is the same person that negotiated for Blue Ridge in 2003 and 2008, correct?

A Yes.
Q Okay. We've had a lot of questions and confusion at least for me about the 8.5 feet of electric supply space, and I want to make everybody heard you right. It comes from the Code of Federal Regulations, right?

A Yes.
Q That's what you said.
A Yes.
(Because of the proprietary nature of the following testimony, it is filed under seal.)



## 

(Testimony on the open record resumed.)

Q Now, the 8.5, that is the electric supply space in a standard pole, is that right, for Blue Ridge?

A Yes.
Q Does it vary based on the height of the pole? A No.

MS. HARDEN: No further questions.
CHAIRMAN FINLEY: Thank you, Mr. Layton. THE WITNESS: Thank you.
(The witness is excused.)
CHAIRMAN FINLEY: You asked him some questions about that RUS and stuff, do you want that -- what are you going to do with that, if anything?

MS. HARDEN: Commissioner Finley, the RUS material is linked to Greg Booth's rebuttal testimony and is already in the record through the link, if that helps.

MR. GEORGE: I don't think that --
MS. HARDEN: Is that right?
MR. GEORGE: No. There's actually dozens of
documents at that link --
MS. HARDEN: Okay.
MR. GEORGE: -- so we would actually would
like to put this in the record if we could.
MS. HARDEN: No objection.
CHAIRMAN FINLEY: Without objection, that will be Layton Cross Examination Exhibit Number 1 and it will be so marked and admitted into evidence.
(WHEREUPON, Layton Cross
Examination Exhibit 1 was marked for identification and received into evidence.)

CHAIRMAN FINLEY: Call your next witness. MS. HARDEN: Call Mr. Will Arnett. Would you please state your name and -CHAIRMAN FINLEY: Hold on a minute. Hold on
a minute.
MS. HARDEN: Okay.
CHAIRMAN FINLEY: Are you set there, Mr. Arnett? Are you set there?

THE WITNESS: I'm sorry. Yes, sir.
WILFRED ARNETT; having been duly sworn,
testified as follows:
DIRECT EXAMINATION BY MS. HARDEN:

Q Please state your name and employer for the record, sir?

A I am Wilfred, and I'm known as Will Arnett, and I'm employed by TRC Engineers, Inc. What is your business address, sir?

A 6095 Professional Park Way in Douglasville, Georgia.

Q On whose behalf are you testifying in this proceeding?

A Blue Ridge EMC.
Q Did you cause to be prefiled in this docket on October 16, 2017, direct testimony consisting of 47 pages and Exhibits 1 through 23, and then on November 6, 2017, rebuttal testimony consisting of 25 pages and Exhibits 24 through 35?

A Yes, ma'am, I did.
Q Do you have any corrections to make to that prefiled testimony at this time?

A Yes, ma'am, I do.
Q What corrections do you need to make?
A It occurred to me as $I$ was listening to earlier testimony today that when we calculated the average span length for our Blue Ridge system we
didn't include the 1345 joint use poles that were also used by Blue Ridge EMC, and so during lunch I reviewed those, the impact of that on the average span length and looked at what it would do to the sag, and it changes the sag at mid-span by one inch.

Q And is that -- do you have any other corrections that you'd like to offer?

A No, ma'am, I do not.
If $I$ were to ask you, other than the sag changing by one inch, the same questions today as set forth in your testimony and rebuttal testimony, would you answer those the same as set forth in that testimony?

A Yes, ma'am, I would.
Q At this time, I move that Mr. Arnett's prefiled direct and rebuttal testimony with exhibits be copied into the record as if delivered orally from the stand, and the exhibits be marked as prefiled and received into evidence with the testimony?

CHAIRMAN FINLEY: We will copy into the record as though given orally from the stand Mr. Arnett's direct testimony consisting of 47 pages
filed on October 16, 2017, and we will at this point only mark for identification his 23 direct exhibits. (WHEREUPON, WA Exhibit 1 through WA Exhibit 23 are marked for identification as prefiled.)
(WHEREUPON, the prefiled direct testimony of WILFRED ARNETT is copied into the record as if given orally from the stand.)

## DIRECT TESTIMONY <br> OF <br> WILFRED ARNETT

## I. BACKGROUND AND EXPERIENCE

## Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND POSITION.

A. My name is Wilfred ("Wil") Arnett. I am currently a Director at TRC Engineers, Inc., located at 6095 Professional Parkway, Suite 102-B, Douglasville, Georgia 30134.
Q. PLEASE DESCRIBE TRC.
A. TRC is a national engineering, consulting and construction management firm providing integrated services to the power, oil and gas, environmental and infrastructure markets. I manage a portion of TRC that specializes in joint use and pole attachment consulting services to investor-owned electric utilities ("IOUs"), electric cooperatives and municipally-owned power providers. Our clients range from very small municipal and cooperative power providers to regionally owned IOUs serving millions of customers. Ás Director - Joint Use Services at TRC, I provide advice regarding pole attachment issues, pole attachment rate calculations, contract interpretation, contract negotiation assistance, rights of way assistance, and various other consulting services. TRC also provides engineering design, inspection, outside plant construction management and rights of way services to IOUs, electric transmission companies, electric cooperatives, municipal power providers and communications companies, throughout the entire USA.

## Q. PLEASE DESCRIBE YOUR PROFESSIONAL BACKGROUND AND EXPERIENCE.

A. My experience in joint use and pole attachment issues spans almost 51 years. I spent 30 of those years working on such issues for BellSouth, an Incumbent Local Exchange Carrier ("ILEC") headquartered in Atlanta. I spent 17 years in BellSouth's Engineering Department, performing and managing all aspects of outside plant engineering. I spent 12 years in headquarters positions, both at the state and company levels. I managed joint use, right of way, and engineering contracts for BellSouth's North Sector (Georgia, South Carolina and North Carolina) from 1987 until 1995. I concluded my career with BellSouth in the BellSouth Entertainment/BellSouth Broadband groups, with the mission of re-entry into the cable television business in BellSouth's 9-state area. Upon retirement from BellSouth in 1996, I became involved in consulting on joint use matters. In that capacity, I have for the last 21 years supported Investor-Owned Utilities, Municipally-Owned Utilities, and Electric Coops with design, inspection, and joint use services. I am well experienced in joint use and pole attachment matters, including, but not limited to, operational matters, design of traditional ILEC facilities, and the evolution of joint use rate methodologies. A complete list of my work record is attached as WA Exhibit No. I.

## II. SUMMARY

Q. FOR WHOM ARE YOU TESTIFYING IN THESE PROCEEDINGS?
A. Blue Ridge Electric Membership Corporation ("Blue Ridge").
Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?
A. The purpose of this testimony is to identify the just and reasonable rate for Blue Ridge to charge Charter Communications Properties, LLC, ("Charter") for attachments of its facilities to Blue Ridge's distribution poles.
Q. PLEASE SUMMARIZE YOUR CONCLUSIONS.
A. The rate formula recently adopted in 2016 by the Tennessee Valley Authority ("TVA"), described below, should be used by the Commission to determine the rate for Blue Ridge to charge Charter for attachments to Blue Ridge's distribution poles. The TVA formula properly allocates the annual costs of utility poles between electric cooperatives and attachers, such as Charter, based on a true understanding of the amount of space on the distribution poles they actually use. For instance, the TVA formula allocates the costs associated with the so-called "support space" on the pole (the portion used to achieve ground clearance), equally among all attaching entities, because all attachers require a pole that is a certain number of feet off the ground and therefore benefit equally from this space. As a resuit, the TVA formula ensures electric rate payers do not subsidize communications attachers' businesses.

The rate calculations attached hereto as WA Exhibit Nos. 2.1, 2.2, and 2.3 reflect the proper calculation of Blue Ridge's annual distribution pole costs for years 2014, 2015 and 2016, respectively, and an appropriate allocation of those costs for each of those years based upon the TVA formula.
III. THE TVA RATE FORMULA
Q. WHAT IS THE PROPER FORMULA TO DETERMINE A JUST AND REASONABLE RATE FOR ATTACHMENTS TO BLUE RIDGE'S DISTRIBUTION POLES?
A. The proper formula to calculate a just and reasonable rate for attachments to Blue Ridge's distribution poles is the formula adopted by the TVA in February of 2016 for approximately 165 electric cooperatives and municipally-owned utilities that it regulates. A copy of the TVA Board's February 2016 resolution is attached at WA Exhibit No. 3. It is marked "Proposed Board Resolution" and "TVA Restricted Information Confidential and Business Sensitive," but is available publically at: https://www.tva.gov/About-TVA/Guidelines-and-Reports (scroll down to "Legal Reports").
Q. WHY IS IT PROPER TO USE TVA'S RATE FORMULA RATHER THAN THE FCC CABLE FORMULA CHARTER HAS PROPOSED?
A. TVA's decision regarding pole attachment rates is a federal decision far more relevant than any Federal Communications Commission ("FCC") decision because the FCC has no jurisdiction over attachments to electric cooperative
poles and so its decisions do not affect electric cooperatives anywhere, much less in North Carolina.

TVA is a corporate agency of the United States operating in seven southeastern states, including North Carolina. TVA is the exclusive rate regulator for electric cooperatives that distribute TVA power, and has jurisdiction over three electric cooperatives and one municipally-owned system, serving North Carolina, (Blue Ridge Mountain Electric Membership Corp., Tri-State Membership Corp., Mountain Electric Cooperative, and the City of Murphy).

Further, TVA's guidance is consistent with Rural Electrification Administration ("REA") policies originating with the dawn of joint use between electric coops and communications companies. Specifically, REA stated "...even though power system poles are already in place and can accommodate telephone facilities with little, if any, extra cost, telephone companies should be required to make payments representing their fair share of the costs of the poles so that saving can accrue to the consumers of electricity as well as to the telephone subscribers. In other words, the power consumers should not be asked to subsidize telephone subscribers." (See WA Exhibit No. 4. at p. 2). As explained in TVA's decision attached at WA Exhibit No. 3, TVA's pole attachment rate formula was approved to ensure electric cooperatives are "appropriately compensated for the use of electric system assets," and that "failure to do so will have a direct impact on retail electric rates because electric ratepayers will be forced to subsidize the
business activities of those entities that are utilizing electric system assets." (WA Exhibit No. 3, at Attachment A, p. 1, Determination By TVA Board). The TVA decision explains very carefully the formula it adopted, including a diagram of a pole indicating which space on the pole each attaching entity should pay for. TVA adopted this formula only after considering, fully analyzing, and rejecting the FCC formula.

## Q. DID TVA FULLY CONSIDER THE FCC FORMULA BEFORE

 ADOPTING ITS OWN RATE FORMULA?A. Yes. After reviewing the FCC's rate formulas and the FCC's rationale, TVA's Regulatory Staff determined that "because the FCC formulas are designed to further the policy goal of encouraging broadband investment, particularly in rural areas, they do not appropriately compensate the electric utility for the attachment." WA Exhibit No. 3, at Attachment B, p. 1. However, the TVA, like electric cooperatives and this Commission, recognized that it is "charged with keeping electric rates as low as feasible, and ensuring that electric ratepayers do not subsidize other business activities is important in achieving this objective." WA Exhibit No. 3, at Attachment B, p. 1. Accordingly, it found the FCC formula insufficient to fully compensate cooperatives for communication attachers' use of their poles.

## Q. PLEASE DESCRIBE THE RATE CALCULATION APPROVED BY TVA.

A. Like the pole attachment rate calculations used by FCC, the TVA formula calculates an attachment rate for distribution poles by multiplying three
factors: (i) net cost of a bare distribution pole; (ii) carrying charges; and (iii) the space allocation percentage (i.e., the percentage of the total pole costs to be paid for by the attacher). TVA's rate calculation uses the same net cost of a bare distribution pole and carrying charge calculations used by the FCC, except that TVA specifies an average 3-year maintenance cost and further specifies an $8.5 \%$ rate of return on investment for purposes of calculating the carrying charges. The FCC currently presumes a $10.75 \%$ rate of return. Those distinctions aside, the principal difference between the TVA and FCC formulas arises from TVA's regulatory philosophy that (a) the parties benefitting from the various sections of the pole should be responsible for those costs, and (b) where multiple parties derive benefit, those respective costs should be shared equally. In other words, while the "annual carrying charge" calculations are the same, the way those costs are allocated among the attaching entities differs.

## Q. DOES THE TVA RATE PROVIDE FOR A PER POLE, OR PER

 ATTACHMENT, RENTAL RATE?A. The TVA rate method provides for a "maximum rate per pole," instead of a "per attachment" rate. Like the FCC formulas, TVA provides for a rebuttable presumption of one foot occupied by a third-party attacher.
Q. HOW DO THE TVA AND FCC FORMULAS DIVIDE THE POLE FOR PURPOSES OF DETERMINING THE SPACE ALLOCATION?
A. While the TVA formula allows for the use of actual figures, both the TVA and FCC formulas start with the presumption that a pole is 37.5 feet tall, and that
if there are three attachers (the electric utility, a cable company, and a telephone company), the pole should be divided as follows:

- "Support Space" (Presumed to be 24 feet) - The lower portion of the pole, including (a) that portion which is buried, and (b) the portion that is necessary to provide sufficient clearance above the ground for attachers' facilities. Those portions are presumed to be $6^{\prime}$ and 18 ', respectively.
- "Usable Space" (Presumed to be 13.5 feet) - The upper portion of the pole, above the minimum point of attachment required by the NESC or regulatory authorities for minimum ground clearance, to which electric utilities and communication service providers may attach their lines. Assuming there are three attachers-an electrical utility, a cable provider, and a telephone provider-this "Usable Space" is presumed (illustrated in TVA's documentation) to be subdivided as follows:
- Electrical "Supply Space" ( 7.17 feet) - The space in which the electric utility may attach its lines, transformers, and other facilities.

O"Communications Worker Safety Zone". 3.33 feet) - A fortyinch clearance zone which between any communications and electrical facilities, required by the NESC to protect communications workers from contact with a utility's electrical facilities.
$\circ$ Cable (one foot) - One foot allocated to the cable provider's attachment.

- Telephone (two feet) - Two feet allocated to the telephone provider's attachment.

Figure 1, below, is a diagram of a pole showing this division:

## Figure 1



## Q. HOW DOES TVA'S SPACE ALLOCATION PERCENTAGE DIFFER FROM THE FCC'S SPACE ALLOCATION PERCENTAGE?

A. TVA recognizes that certain portions of the pole are of equal benefit to all attaching parties. Specifically, all attaching entities require, and derive equal benefit from, the "Support Space"-the portion of the pole in the ground and the portion of the pole necessary to provide for the minimum ground clearance required by state or local law and the National Electrical Safety Code ("NESC"). The TVA formula therefore apportions the costs associated with the Support Space equally among all attaching entities, including the pole owner. Under the FCC's Telecom rate formula, however, only two-thirds of the Support Space is allocated equally among all attachers, which includes the pole owner. The remaining one-third of the Support Space is then allocated entirely to the pole owner as well. In essence, the FCC Telecom rate formula implies that the power company pole-owner has a greater need for ground clearance than the attaching communications companies. Obviously, this is not the case.

Under the FCC's Cable rate formula, which Charter has proposed in this matter, only 7.4\% of the Support Space is allocated to the cable attacher, even though all attachers require, and benefit equally from, that space. The result is that on Blue Ridge poles with one foreign attaching entity, such as Charter, Blue Ridge would be responsible for the remaining $92.6 \%$ of the costs associated with the common space. Figure 2, below, is a comparison showing how the TVA and FCC Cable Rate allocate space on the pole.
A. Yes. All attaching entities benefit equally from the Support Space on the pole and therefore should pay an equal share of those costs. All attaching entities need the pole $6^{\prime}$ below ground (for stability) and need their facilities at least 18' above ground (for NESC compliance and public safety). In addition, all attachers use the common space to (a) install their cable "risers" (transitions between overhead and underground cable facilities), (b) as "climbing space" for workmen to reach aerial facilities to install new services and for maintenance of existing facilities, and (c) to install hardware such as power supplies, terminals, crossboxes / interfaces, meters, telephone load coils and capacitors, aerial to buried service wires, etc.

## Q. HOW ELSE DOES TVA'S SPACE ALLOCATION PERCENTAGE DIFFER FROM THE FCC'S SPACE ALLOCATION PERCENTAGE?

A. TVA and the FCC differ in how they allocate costs associated with 40 -inch Communications Worker Safety Zone, which is the 40 -inch separation between communications attachments and energized electric facilities required by the NESC. The Communications Worker Safety Zone space exists only to protect communications workers and would not be required if there were no communications companies attached to the pole., Yet, despite this, the FCC counts the Communications Worker Safety Zone as a portion of the usable space, and thus allocates the costs of this space predominantly to the electric utility. The TVA formula instead allocates costs associated with the Communications Worker Safety Zone equally among, and solely to, communications attachers.

## Q. DOES IT MAKE SENSE THAT TVA WOULD ALLOCATE COSTS ASSOCIATED WITH THE 40-INCH SAFETY SPACE ONLY AMONG COMMUNICATIONS ATTACHERS?

A. Yes. It makes a lot of sense to allocate the costs associated with the 40 -inch Communications Worker Safety Zone to the communications attachers alone, and not to the electric utility. The 40 -inch safety space creates a 40 -inch separation between communications attachments and energized electric facilities. The purpose of this space is to protect communications workers, who are neither qualified, nor equipped, to work with energized conductors. Power company workmen are trained and properly equipped to work in hazardous voltages. They wear appropriate clothing, use appropriately insulated tools, and operate out of insulated buckets on aerial lift vehicles. The safety space would not be required, nor would it be provided on the pole, but for the presence of communications attachments.

The Communications Worker Safety Zone therefore exists solely to protect communications workers-i.e., the cable company's personnel. It would not be necessary but for the presence of the communications attachments. That is why the NESC calls the 40 -inch safety space the "Communications Worker Safety Zone." The costs associated with this space therefore should be allocated to the communications attachers, not the electric utility.
Q. HOW DO YOU RECONCILE THE INSTALLATION OF STREETLIGHTS AND SECURITY LIGHTS IN THE COMMUNICATIONS WORKER SAFETY ZONE AND ALLOCATING

THE COST OF THAT SPACE SOLELY TO THE COMMUNICATIONS COMPANIES?
A. The purpose of the 40 -inch Communications Worker Safety Zone is to protect the communications worker from hazardous voltages. In order to comply with the NESC, a pole must include this additional 40-inch space any time a communications attachment is placed on the pole-even if it is merely a service wire. The NESC also requires a separation of one foot ( $1^{\prime}$ ) between communications attachments. Thus, the presence of a single communications attachment results in the cooperative having to install a pole that is at least 52 inches (4.33') taller than it would otherwise need. It is true that the NESC permits utilities to install streetlights or other security lights in the 40 -inch space, but it also permits the installation of those lights in the electric supply space, below communications attachments, or anywhere else on the pole. In other words, even if there were no Communications Worker Safety Zone, an electric cooperative could still install a streetlight without having to install a taller pole. Put another way, a cooperative could install shorter poles if there were no communications attachers and still install streetlights. The only reason the cooperative has to install a pole that includes the 40 -inch Communications Worker Safety Zone, and is thus taller than it otherwise needs, is that a communications attacher, like Charter, has attached to its pole.

Perhaps more to the point, Blue Ridge does not have a practice of installing streetlights in the Communications Worker Safety Zone. I understand that

Greg Booth, who is also testifying in this matter, reviewed a substantial portion of the poles to which Charter has attached on Blue Ridge's system and found that almost all of the streetlights on Blue Ridge's system are installed in the electrical Supply Space. Thus, the mere fact that the NESC allows streetlights to be installed anywhere on the pole, even though Blue Ridge does not have a practice of installing lights in the Communications Worker Safety Zone, should not alter the conclusion that the costs of the Communications Worker Safety Zone should be allocated entirely to the communications attachers.

## Q. HOW ARE COSTS ASSOCIATED WITH THE USABLE SPACE ON THE POLE ALLOCATED BY TVA?

A. Like the FCC, TVA presumes that the average pole height is 37.5 feet. Like the FCC, TVA presumes that 24 feet of that pole is Support Space. The FCC presumes that the remaining 13.5 feet, including the 40 -inch Communications Worker Safety Zone, is all "usable space" that should be apportioned equally among all attaching entities, including the electric utility. As explained above, TVA allocates costs associated with the 40 -inch Safety Space entirely to communications attachers, which leaves 10.17 feet of usable space. TVA and the FCC then allocate the costs associated with these usable space figures based on the amount of space each attacher is presumed to occupy. Both formulas presume that cable companies' attachments use one foot ( $1^{\prime}$ ) of space. The TVA formula, however, treats this number as a rebuttable presumption. Thus, Charter's rebuttable share of usable space costs under the

TVA formula is $1 / 10.17$ (9.8\%), and its share under both the FCC Cable formula and the FCC Telecom formulas is $1 / 13.5$ (7.4\%).
Q. WHAT ARE THE SPACE FACTOR PERCENTAGES THAT THE TVA FORMULA GENERATES?
A. Under TVA's formula, the percentage of total annual distribution pole costs (for the entire pole) that a cable company attacher would pay on a pole with three attaching entities (including the electric cooperative pole owner) is 28.44\%. TVA's calculation resulting in $28.44 \%$ appears at WA Exhibit No. 3 , Attachment A, Appendix 2 (Pole Attachment Formula Example). This presumes that each pole has three attaching entities (the electric utility, a telephone company, and a cable company). It also uses a presumed pole height of 37.5 feet and that the Support Space is 24 feet. The percentage, however, can change, up or down, if the pole owner or attacher has data sufficient to rebut any of these presumptions.
Q. HOW DOES THE SPACE FACTOR PERCENTAGE THAT THE TVA FORMULA GENERATES CHANGE WHEN THE AVERAGE NUMBER OF ATTACHING ENTITIES IS PROVEN TO BE GREATER OR LESS THAN THREE?
A. Under the TVA formula, the percentage increases if the average number of attaching entities is less than three, and it decreases if the average number of attaching entities is greater than three.
Q. IS THAT CONSISTENT WITH THE FCC CABLE FORMULA?
A. Yes it is.

## IV. APPLICATION OF THE TVA FORMULA TO BLUE RIDGE

Q. YOU SAID THE TVA USES CERTAIN REBUTTABLE

PRESUMPTIONS. WHAT ARE THOSE REBU'TTABLE PRESUMPTIONS?
A. The TVA formula uses several rebuttable presumptions. First, it presumes there is an average of three attachers on the cooperative's poles (the cooperative, a telephone company, and a cable company). Second, the TVA formula assumes that the average height of a cooperative's distribution poles is 37.5 feet. Third, it presumes that the cooperatives poles are spaced in such a way that the first attacher will attach 18 feet off the ground, and that the inground depth of the pole is 6 feet. Fourth, it presumes a "non-pole" appurtenance factor of $15 \%$. Finally, the TVA formula presumes that cable companies' attachments occupy exactly one foot of space.
Q. DOES BLUE RIDGE HAVE DATA SUFFICIENT TO REBUT THE PRESUMPTION THAT THERE ARE THREE ATTACHING ENTITIES ON ITS DISTRIBUTION POLES?
A. Yes, it does. Blue Ridge completed an inventory of its entire system in 2016, and the data necessary to calculate the average number of attaching entities to its distribution poles is available from the inventory results. The average number of attaching entities on Blue Ridge's system is 2.35. A spreadsheet showing the calculation of the number of attaching entities is provided in WA Exhibit No. 5.

## Q. HOW DOES THAT CHANGE THE SPACE FACTOR PERCENTAGE USING THE TVA FORMULA?

A. The average number of attaching entities is less than TVA's presumption of 3. Therefore allocations of cost associated with the common (or "unusable") space, and the "Safety Space" are higher than under the presumption because there are fewer entities sharing those total costs. As stated above, as the average number of attaching entities decreases, the rental rate increases.
Q. HAVE YOU MADE ANY ADJUSTMENTS TO OTHER REBUTTABLE PRESUMPTIONS EMBODIED IN THE TVA FORMULA TO REFLECT ACTUAL DATA?
A. Yes, I have also used actual numbers for three other rebuttable presumptions utilized by the TVA method. Specifically, I have used (1) the actual average distribution pole height of $36.83^{\prime}, 36.85^{\prime}$ and $36.87^{\prime}$ for 2014, 2015 and 2016 respectively, (2) a "bare pole" or, appurtenance factor, of $87.0 \%, 87.29 \%$ and $87.41 \%$ for 2014,2015 , and 2016, respectively, and (3) an "occupied" space allocation of 1.11' for Charter in all 3 periods.

## Q. PLEASE EXPLAIN HOW YOU ARRIVED AT THE AVERAGE DISTRIBUTION POLE HEIGHT?

A. Blue Ridge maintains, in its Continuing Property Records (CPRs), a running balance of unique pole sizes and types, as well as the cumulative expenditures for those surviving poles. By multiplying the number of poles at each unique height by the specified height, summing the resulting "feet of distribution poles", and finally dividing the total footage by the number of units, one
arrives at the average distribution pole height. See WA Exhibit No. 6 for the above calculation for yearend 2016.

## Q. COULD YOU ALSO EXPLAIN HOW YOU DETERMINED THE APPURTENANCE FACTOR FOR BLUE RIDGE'S ACCOUNT 364 ?

A. As stated above, Blue Ridge's CPRs maintain a running record of the number of units and the related dollars in Account 364, which is the asset account for "Poles, Towers and Fixtures." In addition to poles, Blue Ridge's CPRs track other items of plant that are appropriately capitalized to Account 364 (See WA Exhibit No. 7 - REA Uniform System of Accounts for Account 364). In the rental formulas, only items in Account 364 that are of benefit to both parties are included in the determination of "bare pole costs." The industry assumes that $85 \%$ of Account 364 represents the average "bare pole cost," or the appropriate pole costs exclusive of "appurtenances." FCC 87-209 explains that poles, anchors and guys are the appropriate items of plant to be included in "bare pole costs" (See WA Exhibit No. 8). After (1) totaling the dollar balances in the CPRs for "bare pole" items (poles, anchors and guys), and (2) dividing the resulting number by the total capital $\$$ in the account, the actual appurtenance factor is derived. See WA Exhibit No. 9 for the Blue Ridge 2016 calculations.

Q. AND PLEASE ALSO EXPLAIN YOUR CALCULATION OF
CHARTER'S "OCCUPIED" SPACE ALLOCATION OF 1.11 FEET
INSTEAD OF THE PRESUMED 1 FOOT?
A. The system inventory completed in 2016 captured not only the Blue Ridge poles with Charter attachments, but also the number of Charter's attachments on each pole. Charter is attached to 24,888 Blue Ridge poles with 27,674 attachments (see WA Exhibit No. 10), indicating an average of 1.11 attachments per pole. Based on the assumption that each attachment occupies I foot of space, Charter's average occupied space allocation is 1.11 feet.
Q. ARE THERE ANY OTHER ADJUSTMENTS MADE TO THE ASSUMPTIONS USED IN THE TVA FORMULA?
A. Yes, because Blue Ridge's typical 257-foot span length-the system average distance between poles-is longer than those used in the assumptions (which is approximately 150 feet), attachers are required to attach higher on the pole to ensure ground clearance in the middle of the span which is presumed to be the point where maximum sag occurs. I have adjusted the Support Space to reflect this.

## Q. PLEASE EXPLAIN HOW YOU ARRIVED AT THE ADJUSTMENTS

 TO BOTH THE COMMON SPACE AND ALLOCATED SPACE ON BLUE RIDGE'S POLES.A. I calculated the maximum sag under two different industry-standard methods: (1) AT\&T's Outside Plant Engineering Handbook, (see WA Exhibit No. 11 AT\&T OSP Engineering Handbook - Section 10 - Aerial Plant), and (2) a CATV industry-standard program known as "Spanmaster" which is available online from CommScope, a manufacturer and suppliers of cable television coaxial and fiber optic cables. The Spanmaster program which can be
downloaded from CommScope's website at the following web address: http://www.commscope.com/resources/calculators.

## Q. WHICH METHOD DID YOU DETERMINE TO BE MOST

## APPROPRIATE?

A. Although the results under both methods were very similar, we selected the CommScope Spanmaster program because necessary information was readily available with respect to cable sizes and weights on the CommScope site. Using the AT\&T method required calculations of the average cable sizes and weights using ARMIS data, which had not been updated since 2008. While we were confident in our results using the AT\&T method, the Spanmaster results were based on the most current information.

## Q. PLEASE DESCRIBE THE COMMSCOPE PROGRAM AND YOUR INPUTS USED TO THE DETERMINE THE MAXIMUM SAG.

A. A general overview of the program was downloaded from the CommScope site and is provided as WA Exhibit No. 12. We calculated the average span lengths of Blue Ridge's distribution system for years 2014, 2015 and 2016 (using CPRs and Form 7 data for each year), and determined that the resulting spans were $258.51^{\prime}, 257.53^{\prime}$ and $257.01^{\prime}$ respectively. We also selected a $1 / 4$ ", 6.6M EHS (Extra High Strength) strand (a standard choice for catv systems), one standard coaxial cable ( .565 " jacketed), and one typical fiber optic cable (96 fibers), from CommScope's tables as the typical "bundle" for sag/design considerations. Our other inputs to the program were the NESC Storm Loading (Rule 251) for Medium ice loading (.25" radial ice on conductors),
and an initial installation sag of $1.5 \%(1 \%-2 \%$ is typical). Spanmaster calculated the "worst-case" or design "sag" for the respective years to be $5.80^{\prime}, 5.78^{\prime}$ and $5.76^{\prime}$. A summary of the Spanmaster calculations are provided as WA Exhibits No. 13.1, 13.2 and 13.3. The required point of attachment ("POA") on Blue Ridge's poles is determined by adding the calculated "sag" to the NESC minimum ground clearance of $15.5^{\prime}$, resulting in NESC minimum POAs of 21.3', 21.28' and $21.26^{\prime}$ in each respective year. RUS requires a minimum depth of installation of 6' for $35^{\prime}$ and $40^{\prime}$ poles. (See WA Exhibit No. 13.4 for RUS Standards). By adding the above POAs to the minimum depth of installation, we determined that the "common" space on a typical Blue Ridge pole was 27.3', $27.28^{\prime}$ and 27.26 ' for the subject years. By subtracting the above "common space" utilization from the average pole height, one can determine the remaining average usable space.
Q. THE TVA RATE USES AN 8.5\% RATE OF RETURN. WHY IS AN 8.5\% RATE OF RETURN APPROPRIATE?
A. The $8.5 \%$ rate or return is the rate required by the TVA formula. This return is appropriate because of how electric cooperatives finance their businesses. The rate at which electric cooperatives borrow money (i.e., its "cost of debt") does not fully account for co-op financing, since co-op members also finance the business of the co-op. Each co-op member finances the business of the cooperative by contributing capital, which they do by using cooperative services and by allowing the cooperative to retain for future growth of the
core business any money collected in excess of actual operating costs. This money, identified in the cooperative's financial reports as "patronage capital," is used to build and maintain the facilities needed to serve the cooperative's members and to service the cooperative's long-term debt. Patronage capital is appropriately considered equity capital furnished by the members, a portion of which will be returned to the members at a later date in the form of capital credits. To account for this unique financing of electric cooperatives, TVA prescribed a non-rebuttable presumptive rate of return of $8.5 \%$. That $8.5 \%$ rate of return, it should be noted, is considerably less than the FCC's current $10.75 \%$ presumptive rate of return.

## Q. HAVE YOU PERFORMED THE TVA FORMULA RATE CALCULATION USING THE COOPERATIVES' COSTS UNDER THE ABOVE DESIGN CONSIDERATIONS?

A. Yes, I have. Those calculations are attached hereto as WA Exhibit Nos. 2.1. 2.2 and 2.3 for years 2014, 2015 and 2016, respectively, which also includes all the cost data used to support those calculations.
Q. WHAT RATES ARE GENERATED USING THE TVA FORMULA?
A. Under the TVA Formula, the annual attachment rates are $\$ 27.08, \$ 26.75$ and $\$ 26.56 /$ pole for years 2014, 2015, and 2016 respectively.

## Q. DO THE ABOVE RATES ADDRESS ALL THE POLE COSTS

 INCURRED BY BLUE RIDGE IN PROVIDING ATTACHMENT SPACE FOR CHARTER?A. As to distribution poles, yes. However, the 2016-2016 inventory revealed that Charter is attached to a significant number (442) of Blue Ridge's transmission poles.

## Q. IS THERE A SIGNIFICANT DIFFERENCE IN THE COSTS OF

 TRANSMISSION AND DISTRIBUTION POLES?A. Absolutely. In 2016, the average installed cost of a transmission pole was \$3,633.24 (see WA Exhibit No. 2.4), compared to the net bare distribution pole cost of $\$ 258.30$ (see WA Exhibit No. 2.3).

## Q. DOES THE RATE YOU HAVE PROPOSED INCLUDE THE COSTS

 OF TRANSMISSION POLES TO WHICH CHARTER HAS
## ATTACHED?

A. No. The TVA rate formula, and the rate that I have proposed, does not include the costs of the transmission poles to which Charter is attached, which, as stated above, are substantially more than distribution poles. Accordingly, the requested TVA rate for attachments to distribution poles is not appropriate or fair for attachments to transmission poles. The FCC rate proposed by Charter is likewise inapplicable to attachments to transmission poles. It therefore would be appropriate for Blue Ridge to charge a rate that reflects the actual cost of transmission poles for such attachments.

## V. CONSIDERATION OF OTHER RATE FORMULAS

Q. HAVE YOU CONSIDERED THE TVA FORMULA IN LIGHT OF OTHER RATE FORMULAS?
A. Yes. I have compared the TVA formula to a number of other potential rate formulas, including the formula adopted by the American Public Power Association ("APPA"), the "Telecom Plus" formula considered by the United States House of Representatives, and the formula adopted by the Arkansas Public Service Commission, and the FCC Cable rate.

## A. APPA RATE FORMULA

Q. IS THE TVA FORMULA CONSISTENT WITH THE APPA RATE FORMULA?
A. Yes it is. It is similar to the method adopted by the APPA for municipal power systems in its 2002 Pole Attachment Workbook. The APPA formula recognizes the inherent value of the pole distribution system to the attachers, as well as the costs that the attachers avoided by not being required to engineer and construct pole distribution systems of their own. A comparison of the various rate methods that I discuss in the testimony is provided as WA Exhibit No. 14.

## Q. WHAT FACTORS DOES THE APPA FORMULA USE IN

 DETERMINING ATTACHMENT RENTALS.A. The APPA developed a rental rate method for use by its municipal utility members that follows the rationale of a decision made in 1998 in a Washington State Court (97-2-02395-5SEA, TCI Cablevision vs. City of Seattle). Published in the October 2002 "APPA Pole Attachment Work Book", that rate methodology is known as the "APPA Rate." (See WA Exhibit No. 15, APPA Pole Attachment Workbook). An extract of the annual
attachment rates section of the APPA Pole Attachment Work Book is the subject of WA Exhibit No. 15. Like TVA, the APPA Rate allocates costs associated with "assigned space" ( $\mathrm{a} / \mathrm{k} / \mathrm{a}$ "usable space") and the Support Space separately. Like the TVA formula, the APPA rate is based on the recognition that the 40 -inch Communication Worker Safety Zone is required by the NESC to separate communications attachments from electric attachments. Under the APPA formula, the Communications Worker Safety Zone is considered part of the "common space" on poles, and therefore shared equally by all attaching parties, including the electric utility. On a presumptive 37.5 -foot pole, therefore, the APPA Rate presumes the common space to be 27.33 feet ( 6 feet underground plus 18 feet minimum height above ground for the first attachment, plus 3.33 feet for communications worker safety zone), and the assigned space to be 10.17 feet. Like the TVA formula, the costs associated with the common space (a/k/a "support space" and "unusable space") on the poles are shared equally among all attachers. The costs associated with the assigned space (a/k/a "usable space") are allocated based on the percentage of that space that is used by the attacher. Thus, on a pole with a presumed height of 37.5 feet and three attachers, each attacher would be required to contribute $27.0 \%$ to the annual costs of owning and operating the poles. This $27.0 \%$ figure is derived as follows. The APPA Rate presumes an average pole height of 37.5 feet, with 10.17 feet of assigned space $(a / k / a$ "usable space"), 27.33 feet of common space ( $\mathrm{a} / \mathrm{k} / \mathrm{a}$ 'support space" and
"unusable space") and "communications worker's safety space, one foot occupied by the cable company, and three attaching entities. Accordingly, the assigned space component is calculated as $(1.0 \div 10.17) \mathrm{X}(10.17 \div 37.5)=$ $2.71 \%$. The common space component is calculated as $27.33 \div 37.5 \div 3=$ $24.29 \%$. Adding the assigned space and common space components together equals $27.0 \%(2.71 \%+24.29 \%=27.0 \%)$, which is comparable to the $28.44 \%$ generated by the TVA formula.

## Q. DID APPA ACKNOWLEDGE IN THE WORKBOOK THAT THE <br> RATE METHODOLOGY EXCEEDS THE FCC CABLE RATE?

A. Yes. Section IV of the Work Book, titled "Pole Attachment Fees and Rate

Methodology", explains in paragraph B.1.(d) that "
....The cable television rate is a holdover from a desire in the late 1970s to assist the (then) nascent cable television industry by establishing a low rate for cable attachments. The cable formula does not reflect the actual cost to utilities of providing pole space, nor does it compensate utilities fairly for the value of their assets. Instead, the cable formula only recognizes the incremental cost of providing pole attachment space. As a result, under federal rules, cable pole attachment rates are, in effect, subsidized by utility customers. Conditions have changed dramatically since the enactment of the cable attachment formula in 1978. Cable operators no longer need financial incentives and protection, and in the increasingly competitive utility environment, it is even more difficult to justify the additional costs absorbed by utilities and their customers for services that are unrelated to their core electric service.
(See WA Exhibit No. 15 (emphasis added)).

## B. TELECOM PLUS FORMULA

## Q. WHAT IS THE TELECOM PLUS FORMULA?

A. The so-called "Telecom Plus" formula is a formula considered by the United States House of Representatives prior to passage of the Telecommunications Act of 1996, 47 U.S.C. § 151, et seq.

## Q. HOW IS THE TVA FORMULA CONSISTENT WITH THE TELECOM PLUS RATE FORMULA?

A. Like the TVA (and FCC) formula, the Telecom Plus Rate Formula calculates the annual costs of owning and operating the poles by multiplying the "Net Cost of a Bare Pole" times the annual "Carrying Charges." The primary difference from the other formulas lies in the allocation of those annual pole costs to the attachers (i.e., the Space Factor Percentage).
Contrary to the FCC formulas but consistent with the TVA formula and the APPA formula, the Telecom Plus Formula allocates $100 \%$ of the "support component" costs (called "common space" by TVA and "unusable space" by the FCC) equally among all attachers, including the pole owner. The Telecom Plus Formula assumes that the clearance component is $18^{\prime}$ and $6^{\prime}$ buried in the ground, on a 37.5 foot pole, consistent with both the TVA and FCC formulas. The remaining 13.5 feet is considered "usable space." The Telecom Plus Formula recognizes that the support component on the pole is of equal value to all attachers, and that attachers would incur significant pole costs -- far beyond the costs of simply attaching to the utility's poles -- if they were required to build their own pole distribution system. As a result, the Telecom Plus method equitably requires all attachers to share those avoided costs
equally. (A copy of NRECA'S Joint Use Toolkit explaining the formula is provided as WA Exhibit No. 16).

The Telecom Plus methodology divides the 13.5' of usable space to attachers based on the amount "allocated to (an) attaching entity." Under this methodology, each communications attacher is presumed to occupy one foot of space on the pole. On a power pole with two communications attachers, the pole owner is therefore charged with the costs associated with the remaining 11.5 feet of the "usable space", including the 40 " Communications Worker Safety Space.

Under this formula, assuming there are three attachers on the pole, (one power utility, aka Owner, and two communications attachers), the Telecom Plus/USHR pole attachment rate would allocate $24.00 \%$ of the pole costs to the communications attacher. This $24.00 \%$ figure is derived as follows. Using a presumptive average pole height of 37.5 feet, with 18 feet of clearance and 6 feet of pole underground adds up to 24 feet for the support component. That leaves 13.5 feet of usable space. The total space occupied by the attacher is calculated as one foot. Accordingly, the usable space component is calculated as $(1.0 \div 13.5) \mathrm{X}(13.5 \div 37.5)=2.7 \%$. The support space component is calculated as $24 \div 37.5 \div 3=21.3 \%$ Adding the usable space and support space components together equals $24.0 \%(2.7 \%+21.3 \%)$, which is comparable to the $28.44 \%$ that the TVA formula generates. The difference between USHR and the APPA method is the way the Communications Worker Safety Space is allocated. Under the APPA method,
the safety space is added to the Unusable, or common space. In the USHR formula, it is treated as a part of the usable space.
Q. HAS THERE BEEN ANY OTHER INDUSTRY SUPPORT FOR THE TELECOM PLUS FORMULA.
A. Yes, both AT\&T and Verizon recommended this formula to the FCC in their joint 2008 ex parte comments. Although their comments do not refer to the method as the "FCC Telecom Plus Formula," their recommended revision to the FCC Telecom Formula provided for an equal allocation among all attachers of the costs related to the "unusable space." (See WA Exhibit No. 17).
Q. DID AT\&T AND VERIZON PROPOSE ANY OTHER CHANGES TO THE ORIGINAL FCC TELECOM FORMULA.
A. Yes, they also recommended that the "rebuttable presumption" of attaching entities be changed to "presume" 4 attachers in both urban and rural locations, instead of the FCC's "presumption" of 5 and 3, respectively.
Q. IS THE ONLY DIFFERENCE IN THE ABOVE 3 FORMULAS THE TREATMENT OF THE COMMUNICATIONS WORKER'S SAFETY ZONE?
A. Yes. The TVA Method allocates the Communications Worker Safety Zone solely to the communications attachers; the APPA Method includes the Communications Worker Safety Zone in the "common space", and therefore allocates that cost equally to all attachers, including the power company pole
owner; and the Telecom Plus Method includes the Communications Worker Safety Zone in the "usable", or "allocated" space on the pole.
Q. IS THE TELECOM PLUS ALLOCATION OF COSTS ASSOCIATED WITH THE COMMUNICATIONS WORKER SAFETY ZONE FAIR AND REASONABLE?
A. No. The proportional costs associated with the 40 -inch Communications Worker's Safety Space should be allocated to the benefiting parties, i.e. the communications attachers. When the Communications Worker Safety Zone is included in the "usable space," and the cable attacher is assumed to use only one foot of space, the costs associated with the safety" space default to the power company pole owner, not to the beneficiaries-the communications attachers.
Q. IS THE TELECOM PLUS ALLOCATION OF COSTS ASSOCIATED WITH THE COMMON SPACE FAIR AND REASONABLE?
A. Yes. By allocating the costs associated with the other support components (a/k/a common space or unusable space) equally to all attachers, including the pole owner, the USHR formula appropriately allocates those costs among the benefitting parties and takes into consideration the value of the distribution system to the attachers
C. ÀRKANSAS PUBLIC SERVICE COMMISSION FORMULA
Q. THE ARKANSAS PUBLIC SERVICE COMMISSION RECENTLY ADOPTED A POLE ATTACHMENT RATE METHODOLOGY.

## WOULD YOU PLEASE EXPLAIN THE ARKANSAS METHODOLOGY?

A. On June 24, 2016, the Arkansas Public Service Commission adopted a rate calculation that uses the same three factors (Net Cost of a Bare Pole X Carrying Charges X Space Allocation Percentage) that the TVA, APPA and FCC rate calculations use. A copy of the Arkansas PSC decision is attached hereto at WA Exhibit Nos. 18.1 and 18.2.

The Arkansas formula calculates the Net Cost of a Bare Pole and Carrying Charges factors just as the TVA, APPA and FCC formulas do, except that Arkansas specifies that the return element is $8.0 \%$ for purposes of the carrying charge calculation. As with the other formulas, the significant difference between the rate calculations is how the Space Allocation Percentage is calculated.

For purposes of calculating the Space Allocation Percentage, Arkansas assumes an average pole height of 37.5 feet, one foot of space occupied by the cable company attacher, and three attaching entities. Like the APPA formula, Arkansas counts the 40 -inch communications worker safety zone (a/k/a safety space) as "unusable space" ( $a / k / \mathrm{a}$ "common space" or "support space"). As with the APPA-Formula, this results in 27.33 feet of "unusable space" ( 6 feet underground +18 feet ground clearance +3.33 feet safety space $=27.33$ feet $)$. Like APPA, the remaining 10.17 feet $(37.5-27.33=10.17)$ is counted as "usable space." Like APPA, the costs associated with the "usable space" ( $\mathrm{a} / \mathrm{k} / \mathrm{a}$ "common space" or "support space") are allocated based on the
percentage of that space that is used by the attacher. Arkansas then allocates those usable and unusable space costs the way the FCC Telecom formula does, by allocating costs associated with one-third of the unusable ("common") space entirely to the pole owner, and then allocating the costs associated with the remaining two-thirds of unusable ("common") space among all attaching entities, including the pole owner.

> Q. WHAT ARE THE SPACE FACTOR PERCENTAGES THAT THE ARKANSAS FORMULA GENERATES?
> A. Under the Arkansas formula, the percentage of total annual pole costs that a cable company attacher must pay on a pole with three attaching entities (including the electric cooperative pole owner) is $18.9 \%$.
> This $18.9 \%$ figure is derived as follows. The Arkansas Rate presumes an average pole height of 37.5 feet, with 10.17 feet of "usable space," 27.33 feet of "unusable space" (a/k/a "common space" and "support space"), one foot occupied by the cable company, and three attaching entities. Accordingly, the usable space component is calculated as ( $1.0 \div 10.17$ ) X ( $10.17 \div 37.5$ ) $=2.7 \%$. The unusable space component is calculated as ( 27.33 $\mathrm{X} 2 / 3$ ) $\div 37.5 \div 3=16.2 \%$. Adding the usable space and unusable space components together equals $18.9 \%$ ( $2.7 \%+16.2 \%=18.9 \%$ ).

## Q. DO YOU BELIEVE THE ARKANSAS FORMULA ALLOCATES

## ANNUAL POLE COSTS IN A FAIR AND REASONABLE WAY?

A. No I do not. Like the FCC Telecom rate, the Arkansas formula allocates onethird of the costs associated with the unusable ( $\mathrm{a} / \mathrm{k} / \mathrm{a}$ "common space" or
"support space") automatically to the pole owner, and then allocates the costs associated with the remaining two-thirds to all attaching entities including the pole owner. There is no justification for this automatic allocation of one-third to the pole owner. Instead, since all attaching entities need the base of the pole six feet underground for structural stability and all attaching entities need their attachments to have a minimum of 18 feet of clearance above ground, the costs associated with these 24 feet should be allocated evenly among all attaching entities. In order to avoid subsidizing the attachers at the expense of the pole owner, I advocate the "per capita" approach which divides the common space equitably to all parties. In addition, I disagree with the Arkansas PSC's allocation of costs associated with the 40-inch communications worker safety zone ( $\mathrm{a} / \mathrm{k} / \mathrm{a}$ "safety space"). Since this space is required by the NESC to protect communications workers, the communications companies should bear the costs associated with that space, not the electric utility pole owner.

In contrast, the TVA formula more appropriately allocates $100 \%$ of the costs associated with unusable ("common") space on the pole equally among all attaching entities, including the pole owner, and more appropriately allocates costs associated with the 40 -inch communications worker safety zone $(\mathrm{a} / \mathrm{k} / \mathrm{a}$ "safety space") to the communications attachers.

## D. FCC CABLE RATE

Q. WHY DOES THE FCC NOT REGULATE ATTACHMENTS TO ELECTRIC COOPERATIVE POLES?
A. When Congress passed the federal Pole Attachment Act, 47 U.S.C. § 224(a), it specifically excluded "any person who is cooperatively organized" from FCC pole attachment jurisdiction. Thus, the FCC's rate formulas do not apply to electric cooperatives like Blue Ridge.

## Q. DID CONGRESS EXPLAIN WHY ELECTRIC COOPERATIVES

 WERE EXCLUDED?A. Yes. The legislative history of the 1978 Pole Attachment Act sets out several reasons why the U.S. Congress excluded electric cooperatives from federal pole attachment regulation. Congress recognized that the unique business models of electric cooperatives, combined with the fact that many of their member/owners also receive cable services, mean that cooperatives themselves are in the best position to set rates, terms and conditions for attachments to their pole. As explained in the Senate Commerce Committee report, Congress found: "[T]he pole rates charged by municipally owned and cooperative utilities are already subject to a decision making process based upon constituent needs and interests." ${ }^{1}$ Congress also noted that because many electric cooperative members also subscribed to cable television service, they already had an incentive to foster the development of cable service: "Cooperatively owned utilities, by and large, are located in rural areas where often over-the-air television service is poor. Thus, the customers of these utilities have an added incentive to foster the growth of cable television in

[^0]their areas." ${ }^{2}$ The same, of course, is true today for broadband and other advanced telecommunications services in rural America and in rural North Carolina. For these reasons, Congress left it to electric cooperatives to determine, among other things, the "equitable distribution of pole costs between utilities and cable television systems."3

## Q. WHAT ABOUT THE COOPERATIVE BUSINESS MODEL MAKES

 THEM DIFFERENT FROM OTHER ELECTRIC UTILITIES?A. Electric cooperatives were formed as a result of the Rural Electrification Act, which provided government funds for individuals and groups to form their own electric utilities to extend electric services in rural portions of the country where investor-owned utilities found it unprofitable to serve. Since the 1930s, cooperatives have been member-owned, democratically-governed utilities owned by and operated solely for the benefit of the people they serve. Most electric cooperatives nationwide, including Blue Ridge, are governed and guided by a set of internationally recognized cooperative principles that foster inclusiveness, community development and collective success, including the provision of affordable electric service in a responsible manner. Electric cooperatives have no stockholders or unaffiliated or corporate investors. Blue Ridge is a non-profit corporation, owned and governed by its members. Corporate investors may be acquainted with investor-owned utilities only through a broker's recommendation or an annual earnings statement. That is not the case with electric cooperatives. Seats on

[^1]cooperative boards of directors are occupied by members of the cooperative who are elected within their local community by their fellow members． Because cooperatives were created and are sustained by the very people they were formed to help，they have a keen interest in consumer protection．In fact，the cooperative business model and its consumer protection benefits are so well－recognized that most states，including North Carolina，exempt electric co－ops from public service commission rate regulation．

## Q．PLEASE EXPLAIN WHY YOU BELIEVE THE FCC CABLE RATE IS INAPPROPRIATE？ <br> A．The FCC Cable rate allows the pole owner，through the rental rate，to recover only a small fraction of the annual costs to own and maintain the poles．Using the FCC＇s assumptions，cable company attachers pay only $7.4 \%$ of the annual costs of owning and operating the poles．As I explain below，this does not make any sense from cost recovery or benefits－received principles． The FCC presumes that the average pole height is 37.5 feet，there are 24 feet of＂unusable space＂（a／k／a＂support space＂or＂commón space＂）on the pole， and the remaining 13.5 feet of space on the pole is＂usable space．＂The FCC Cable rate apportions the costs associated with the entire pole based on the percentage of usable space occupied by the cable company，which is presumed to be one foot．One foot divided by 13.5 feet is $7.4 \%$ ． Having cable companies pay $7.4 \%$ of the annual costs associated with the ＂usable space＂portion of the pole，although not truly fair，as I will explain elsewhere，bears at least a slight resemblance to being equitable．But

requiring cable companies to pay for only $7.4 \%$ of the annual costs associated with the common space ( $\mathrm{a} / \mathrm{k} / \mathrm{a}$ "support space" or "unusable space") makes no sense at all. Cable companies have the same need, as does every other attacher, to have the pole buried six feet in the ground. Cable companies have the same need as every other attacher on the pole to have the pole extend 18 feet, or higher, above ground to achieve necessary ground clearances. Cable companies should therefore pay an equal share of the costs associated with the in-ground and ground-clearance portion of the pole. If there are three attaching entities on the pole, they should pay one-third (33.3\%) of the costs associated with this common space, not $7.4 \%$. Said another way, the annual carrying charge factors apply to the entire pole - not just 1 foot out of 13.5 feet. The costs of maintenance, taxes, depreciation, administrative fees (such as insurance and record keeping), and the costs of capital apply to every foot of Blue Ridge's poles-not just $7.4 \%$ of the pole. In 2016, Blue Ridge's average annual cost for the 5 factors listed above was $\$ 1.75 /$ foot. The "per foot" cost should be allocated fully to a party using $100 \%$ of a specific area, and equally among all parties benefiting from the shared use of a specific area. The TVA Formula most appropriately accomplishes this goal. Any other method of allocating costs creates a subsidy for the party benefiting its free use of that foot of space.

The North Carolina Utilities Commission's Mission Statement (see WA Exhibit No. 19) requires that the NCUC "must regulate in a manner designed to implement the policy of the State of North Carolina to: provide fair regulation of public utilities in the interest of the public; promote the inherent advantage of regulated utilities; promote adequate, reliable and economical utility service; ...provide just and reasonable rates and charges for public utility services and promote conservation of energy" ... among other things. Allowing or encouraging the installation of cable television facilities at a subsidized rate of $7.4 \%$ of the annual cost of ownership, instead of allowing a rate representative of a fair share of those annual costs, is counter to the NCUC's Mission Statement. Charter is not a regulated public utility under North Carolina Statutes, and it does not need subsidized attachment rates. Further, the 1935 North Carolina statute that enabled creation of the State's electric coops (see WA Exhibit No. 20, G.S. 117-10), provides that the State's coops are formed "...for the purpose of promoting and encouraging the fullest possible use of electric energy in the rural section of the State by making electric energy available to inhabitants of the State at the lowest cost consistent with sound economy and prudent management of the business of such corporations." A subsidized rental rate for pole attachments that fails to reflect the benefits derived, and the fully allocated costs of providing those benefits, would be counter to the legislation.
Q. GETTING BÁCK TO COSTS ASSOCIATED WITH THE SO-CALLED "USABLE SPACE" ON THE POLE, WHY DO YOU SAY THAT A 7.4\% ALLOCATION IS NOT FAIR FOR THAT SPACE?
A. Because the FCC includes the 40 -inch "Communications Worker Safety Zone" ( $\mathrm{a} / \mathrm{k} / \mathrm{a}$ "safety space") in its conclusion that there is 13.5 feet of "usable
space．＂As explained above，since this space exists on the pole solely to accommodate communications attachments，the communications attachers should share responsibility for the entire costs associated with that 40 inches of pole space．When there are three attaching entities on the pole（including the electric utility pole owner），the two communications attachers should pay $50 \%$ each for the costs associated with this 40 inches．That is what the TVA formula requires．The FCC Cable rate has the cable company paying for only $7.4 \%$ of the cost of the safety space，which from cost－causation and benefits－ received standpoints is nonsensical． Once that 40 inches of space is removed，what remains is 10.17 feet of＂usable space＂$(13.50-3.33=10.17)$ ．For the costs associated with this remaining 10.17 feet of space，the cable company attacher should pay $1 / 10.17$ ，which is $9.8 \%$ ，not the $7.4 \%$ specified in the FCC Cable formula．

## Q．HAVE YOU CALCULATED BLUE RIDGE＇S 2017 ATTACHMENT RENTAL RATE USING THE FCC FORMULA？ <br> A．Yes，I have．Using the FCC formula，and the default presumptions，the FCC Cable rate would be $\$ 5.33 /$ attachment annually．（See WA Exhibit No．2．5）． <br> Q．AND WHAT IS THE ANNUAL COST OF OWNERSHIP PER POLE FOR BLUE RIDGE？

A．Using TVA＇s prescribed ROI of $8.5 \%$ ，and a 3－year average maintenance factor of $6.91 \%$ ，Blue Ridge＇s 2016 annual costs of ownership were $\$ 64.52$ （ $\$ 258.30$ net cost of a bare distribution pole multiplied by an annual charge
factor of $24.98 \%$ ). The 2016 annual costs of ownership are reflected on the calculations of attachment rental at WA Exhibit No. 2.3.
Q. WHEN YOU COMPARE THE FCC CABLE METHOD RENTAL RATE PER POLE TO THE AVODDED COSTS OF OWNERSHIP IDENTIFIED ABOVE, DOES THIS SEEM LIKE A FAIR SHARING OF COSTS OR DOES IT SOUND LIKE A SUBSIDY TO YOU?
A. The FCC Cable rate for Charter results in a subsidy instead of an equitable sharing of costs.
Q. ON AVERAGE, WHAT IS THE TYPICAL NUMBER OF DISTRIBUTION POLES PER MILE FOR Blue Ridge?
A. I divided the year end 2016 number of distribution poles $(108,330)$ by the miles of overhead distribution (5273.18) shown on Blue Ridge's latest Form 7 , and the result is 20.54 pole/mile.
Q. USING THE FCC CABLE RATE AND REBUTTABLE DEFAULTS AS THE COST PER ATTACHMENT, WHAT ANNUAL COST WOULD CHARTER INCUR PER MILE FOR AN ATTACHMENT TO THE BLUE RIDGE'S POLES?
A. An annual rental rate of $\$ 5.33$ per attachment multiplied by 20.54 poles/mile yields a "per mile" annual rental rate of $\$ 109.48$ for a single attachment.
Q. WHAT IS CHARTER'S AVOIDED COST BY INSTALLING ITS FACILITIES ON COOP POLES VERSUS INSTALLING EQUIVALENT FACILITIES UNDERGROUND?
A. Charter has confirmed that it budgets, for new underground construction (exclusive of wreck-outs, and regulatory approvals, easements, etc.), $\$ 45,109.40$ per mile, at current costs. Charter budgets, for new overhead construction, $\$ 26,432.37$ per mile. That's a savings of $\$ 18,677.03$ per mile, for which Charter would pay $\$ 109.48$ per year in rents. At the rental rates under the FCC Formula, it would take 170.6 years $(\$ 18,677.03$ savings divided by $\$ 109.48 / \mathrm{mile}$ ) of pole rental (without considering the time value of money) to equal the savings to Charter of just one mile of new aerial cable (instead of underground) on the electric coops' poles.

## Q. WHY DID CONGRESS ADOPT THE FCC CABLE RATE?

A. The Federal Pole Attachment Act was enacted in 1978. At that time, cable television service was just beginning. At the time, it was known as "community antenna television" or "CATV" service. In order to promote a favorable legislative and regulatory environment to expand, CATV companies reported that telephone company pole owners and investor-owned electric utility ("IOU") pole owners had bargaining leverage over them and alleged that some were abusing that position to the detriment of the CATV industry. ${ }^{4}$ The 1978 Pole Attachment Act was Congress's response to those concerns. ${ }^{5}$ In the Pole Attachment Act, Congress established the FCC's Cable rate, and set it at an artificially low level for investor-owned utility poles and telephone company poles because, as Congress stated, a low pole attachment rate in

[^2]1978 was needed in order "to spur the growth of the cable industry, which in 1978 was in its infancy." ${ }^{7}$
Q. DO YOU BELIEVE THAT THE CABLE INDUSTRY IS STILL IN ITS INFANCY AND CONTINUES TO NEED ARTIFICIALLY LOW CABLE RATES TO GROW?
A. Certainly not. Charter, currently headquartered in Connecticut, had $16,205,000$ customer relationships at the end of $2016^{7}$. It had $\$ 75,845,000,000$ of "Member's Equity", assets of $\$ 148,319,000,000$, reported revenue of $\$ 29,003,000,000$ for 2016 and its net income (a/k/a profits) in 2016 was reported as $\$ 1,457,000,000$.

Not only has Charter grown tremendously from its infancy in 1978, the rates that Charter charges subscribers for its services are higher now than ever. While the national average monthly bill for cable's expanded basic programming package in 1995 was only $\$ 22.35$ (See WA Exhibit No. 21, FCC 06-179 Report on Cable Industry Prices), Charter's average revenue per customer at the end of 2016 was $\$ 92.23$ per month (Charter's annual revenue/Charter's customer relationships).

The yearly rates that Blue Ridge is proposing are only a fraction of Charter's monthly revenue per customer. Charter reports that its average density in areas it serves that include Blue Ridge's territory is 53 homes per mile, with an average penetration of $45 \%$, or 23.85 subscribers per mile $(23.85 \times 12 \times$

[^3]$\$ 92.23=\$ 26,396.23 /$ year $)$, the Blue Ridge proposed 2016 annual pole rental (under the TVA Formula) per mile represents only $2.07 \%(\$ 26.56 \times 20.54=$ $\$ 545.54 / \$ 26,396.23$ ) of Charter's average subscriber revenue per mile on Blue Ridge's system.

These very small payments allow Charter, a company with $\$ 1.844$ billion in annual profits, to gain access to assembled corridors and fully-constructed and constantly maintained pole distribution systems.

It is inappropriate to allow huge communications companies like Charter to "piggy back" on electric utility poles, particularly electric cooperative poles, without paying a fair attachment rate that reflects the benefits they receive and the costs they save from being able to use someone else's distribution poles.

## Q. DOES CHARTER HAVE ANY ALTERNATIVES OTHER THAN TO

 ATTACH TO BLUE RIDGE'S POLES?A. Yes it does. Charter is considered a utility by the NCDOT and as such has all the options for providing service over the public rights of way to its subscribers as any other utility (NCDOT Utilities Accommodation Manual, Section I, (E)). There is no NCDOT prohibition to Charter owning jointly used poles, or in placing its facilities either buried or in underground conduit. Therefore, Charter can, as an alternative to attaching to coop poles, either install its own poles and share space with another utility or place its facilities below ground.

Telephone companies such as AT\&T-NC have realized the long term savings from underground plant and have designated buried facilities as first choice.
(See WA Exhibit No. 22, AT\&T Outside Plant Engineering Handbook Buried Plant). Although their installed first cost of buried facilities exceeds that of overhead facilities, AT\&T engineers recognize the avoided cost of either their own pole line construction or in the alternative, attachment rental payments to a joint use pole owner.

## VI. POLE ATTACHMENT RATES DO NOT INCLUDE RECOVERY OF "BUT FOR" COSTS

## Q. DO YOU BELIEVE THE ANNUAL POLE ATTACHMENT RENTAL RATE RECOVERS COSTS INCURRED BY THE COOPERATIVES TO ACCOMMODATE CHARTER'S REQUESTS TO ADD NEW FACILITIES?

A. No I don't. The annual pole attachment rental rate is the charge Charter pays to compensate the Cooperative for its portion of the annual pole ownership and maintenance costs that the Cooperative incurs to own and maintain its poles throughout the year. The annual rental rate should be set at a level that does not exceed the attachment rate generated by the pole attachment rental rate formula approved in 2016 by the TVA.

The annual rental rate does not compensate the Cooperative for the costs the Cooperative incurs to evaluate Charter's attachment requests, perform any necessary make-ready rearrangement or transfer work to "make" the poles "ready" for Charter's attachments, to audit and inspect Charter's attachments to ensure Charter is complying with the permitting process and applicable safety rules, and to perform other activities that the Cooperative would not

7 Q．DOES THIS CONCLUDE YOUR TESTIMONY？
8 A．Yes．

CHAIRMAN FINLEY: And we will copy into the record as though given orally from the stand his 25 pages of rebuttal testimony filed on November 6, 2017, and will mark for identification purposes Exhibits 24 through 35.
(WHEREUPON, Rebuttal Exhibits WA-24 through WA-35 marked for identification as prefiled.)
(WHEREUPON, the prefiled rebuttal testimony of WILFRED ARNETT is copied into the record as if given orally from the stand.)

## REBUTTAL TESTIMONY <br> OF <br> WILFRED ARNETT

Q. PLEASE STATE YOUR NAME.

| A. | My name is Wilfred ("Wil") Arnett. |
| :--- | :--- |
| Q. | HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY IN THIS |
| PROCEEDING? |  |
| A. | Yes. I submitted pre-filed direct testimony in this matter on October |
|  | 16, 2017, in support of Blue Ridge Electric Membership Corporation ("Blue |
|  | Ridge"). |
| Q.WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY? |  |
| A. $\quad$ I would like to respond to portions of the testimony submitted by |  |
| Charter Communications Properties, LLC ("Charter") in this matter. In |  |
| particular, , I want to respond to statements made by Patricia Kravtin and |  |
| Michael Mullins, who submitted testimony on béhalf of Charter on October |  |
| 30, 2017. |  |

## 1. THE KEY ECONOMIC AND PUBLIC POLICY PRINCIPLES OF

 EFFECTIVE POLE RATE REGULATIONQ. ARE BLUE RIDGE'S POLES "ESSENTIAL FACILITIES" FOR CHARTER AND CABLE COMPANIES?
A. Cable operators have often referred to utility and incumbent local exchange carrier ("ILEC") poles as "essential facilities." Nonetheless, after considering the existing physical conditions and how many utilities own
poles, even in the same areas, one cannot help but question if poles on a rural electric cooperative's system are in fact "essential facilities." Instead, attaching to a cooperative's poles is one of many options a cable company has in providing its services. The option to attach to a cooperative's poles actually presents an opportunity for cable companies, like Charter, to gain the benefits that come from sharing the costs of a commonly used asset.

Comparing Charter's assertions to the actions of ILECS, shows that rural cooperative's utility poles are not "essential facilities" for communications attachers. ILECS serve the same areas (and customers) as Charter and provide substantially similar services. Yet, in contrast to Charter, ILECs have chosen to own their own poles, enter joint use contracts (as opposed to pole attachment agreements), and in the many instances, have chosen to bury their facilities - even in places where power companies have existing pole networks that the ILECS could use to attach their facilities.

I have attached several pictures showing places where Charter has attached to Blue Ridge poles, but the ILEC (in this case, AT\&T) has chosen to bury its distribution facilities along the same route. (See WA Exhibit Nos. 25.1 through 25.3.) In fact, AT\&T, and other former Bell System Companies such as Verizon, have demonstrated a preference for decades for buried distribution facilities, over aerial construction, for economy, safety and reliability issues. In fact, buried distribution plant is first choice for AT\&T. (See WA Exhibit No. 22, AT\&T's 1994 Outside Plant Engineering Handbook related to Buried Plant). Telephone companies make plant investments based
on the total cost, or "present worth of expenditures" over the service life of the asset, while cable companies appear more likely to make their investment decisions based on the "installed first cost" of plant. As an example, one of the ILEC's serving the Blue Ridge EMC area has recently begun a program to convert existing overhead plant to underground/buried facilities. Blue Ridge's recently completed inventory reflected a significant decrease in the number of Skyline attachments to Blue Ridge poles (a decrease of 1,446 poles) since the previous inventory in 2010.

The fact that Blue Ridge has an average of 2.35 attachers on its poles further disproves Charter's claim that Blue Ridge's poles are "essential facilities." Charter's entire service territory also receives service from ILECs. If Blue Ridge's poles were truly "essential facilities," and communications attachers had to attach in order to provide their services, the average number of attaching entities would be three at a minimum, because the Blue Ridge, the ILEC, and Charter would all have to connect to the pole. However, the 2015-2016 inventory identified 7,889 Blue Ridge poles where Charter is the only attacher. If Blue Ridge poles are truly "essential facilities," and the telephone companies serve the same areas as Charter, one would expect the ILECs to also have attachments Blue Ridge's poles. This shows that other communications companies also have an alternative instead of attaching to Blue Ridge's poles.

ILECs also have chosen to install their own poles in areas where Charter is the only attacher on Blue Ridge poles. Indeed, at the end of 2016,

AT\&T owned 235,763 poles in North Carolina. (See WA Exhibit No. 26, AT\&T NC 2016 Armis Report 4301.) In those areas where both the Blue Ridge and an ILEC own poles, the ILECs' poles are also available for Charter to make its attachments. This means that Charter has a choice whether to seek an attachment to the ILECs poles or Blue Ridge's poles, which means that Blue Ridge's poles are not essential facilities.

Further, I know of no North Carolina regulation, or law, that prohibits Charter from owning and sharing use of joint poles with other utilities such as Blue Ridge. If, in fact, the ownership of joint use poles provides other benefits to the owner, as Ms. Kravtin claims, why shouldn't Charter be a pole owner, and the power company a licensee?

## Q. HOW DO YOU RESPOND TO MS. KRAVTIN'S AND MR. MULLINS' REPEATED ASSERTIONS THAT CHARTER ONLY USES "SURPLUS SPACE" ON BLUE RIDGE'S POLES?

A. I found no documentation in Ms. Kravtin's and Mr. Mullins' testimony to support of their repeated claims that Charter only uses "surplus space" on Blue Ridge's poles, even though Ms. Kravtin made that claim at least eleven times in her testimony. The records, instead confirm that their claim there is "surplus space" on Blue Ridge's poles is incorrect. In fact, Blue Ridge does not have a policy to design and install poles with surplus space. Blue Ridge instead designs its poles, which typically have a service life of 30 years, to support Blue Ridge's existing and future facilities over the life of the asset. What Ms. Kravtin and Mr. Mullins refers to as "surplus space" is instead
space planned for future use. When a utility invests in a 30 -year asset, engineering practice, and economics, dictates that the asset should be sufficient to provide for the utilities' present needs as well as the facilities it may need to add in the future to serve its customers.
Q. IS THERE EVIDENCE THAT FURTHER SHOWS THERE IS NO SURPLUS POLE SPACE ON BLUE RIDGE'S POLES?
A. Yes, there is. First all, Blue Ridge's average pole height has already been established to be less than the industry presumed average of 37.5 feet. We determined from Blue Ridge's continuing property records at yearend 2016 that the average distribution pole is 36.87 feet in height. We also determined that the average span length on the Blue Ridge system is 257.01 feet. Longer spans require a higher point of attachment to meet NESC, and NC DOT, ground clearances at mid span. Shorter average poles further limit the space available on the pole for communications attachments.

Mr. Booth, in his October 16 direct testimony, provides an example of Blue Ridge's typical distribution design. (See Booth, Direct Testimony, p. 15, Figure 1). Blue Ridge legacy distribution specifications requires 8.5 feet for distribution facilities in its typical configuration ( 9.5 feet in the new/current specification). The average height of distribution pole on Blue Ridge's system is 36.87 feet. The depth of placement for both 35 feet and 40 feet poles is 6 feet under RUS specifications. Subtracting 6 feet from the average pole leaves 30.87 feet above ground and available to support facilities. Blue Ridge's legacy design requires 8.5 feet for distribution facilities $(9.5$ feet

## 6036 <br> PUBLIC

currently), on a typical pole over its service life, as stated above. Subtracting 8.5 feet from the above ground portion of an average Blue Ridge pole ( 30.87 feet) leaves 22.37 ' of pole below Blue Ridge distribution facilities, in the legacy configuration, and 21.37 feet under the new specification. If a communications attachment is placed on the pole, the NESC requires 3.33 feet (40 inches ) separation between supply facilities and communications facilities. By subtracting the NESC required Communications Workers' Safety Space ( 3.33 feet), we determine that the highest possible point of attachment for communications is 19.04 feet (legacy Blue Ridge specifications). As shown in WA Exhibit No. 13.3. I previously determined Charter's calculated sag to be 5.76 feet (using CommScope's Spanmaster program - on a typical $1 / 4$ inch ( 6.6 mm ) strand; on Blue Ridge's typical span of 257.01 feet; under NESC Medium loading). The NESC also requires 15.5 feet minimum ground clearance for communications attachments on the overwhelming majority of Blue Ridge's system. Subtracting the calculated sag for Charter's facilities ( 5.76 feet) from the highest possible point of attachment ( 19.04 feet) for communications, leaves 13.28 feet of calculated ground clearance under ice loading. This exercise demonstrates that Charter cannot attach its facilities to an average Blue Ridge pole and meet NESC ground clearance requirements with ice loading without encroaching into Blue Ridge's designed space. Said another way, there is no "surplus space" on Blue Ridge's average poles for communications facilities. Another example of this calculation, using Pole Foreman's Sag Line calculations is also
provided as WA Exhibit No. 27. The Pole Foreman analysis also yields a midspan ground line clearance of 13.2 feet for Charter's facilities under the same conditions.

## Q. MS. KRAVTIN ALSO REFERS TO THE "ECONOMIC PRINCIPLES OF COST CAUSATION AND SUBSIDY AVOIDANCE UNDERLYING COST BASED RATES." DO YOU HAVE ANY COMMENTS RELATED TO COST AVOIDANCE THROUGH JOINT USE?

A. Joint use of poles originated in the early 1900 s because there were two entities (communications and power) constructing outside plant facilities on separate pole lines to serve the same customers. Safety was the initial concern of the parties because there were concerned about structural and inductive interference between facilities installed on two separate pole lines. Joint use of poles was studied almost 100 years ago by the National Electric Light Association, predecessor of the Edison Electric Institute, and the Bell System and determined to be a feasible alternative to construction of individual pole lines. Three joint use practices were developed and published in the 1920 s. "Principles and Practices for the Inductive Coordination of Supply and Signal Systems", December 9, 1922; "Principles and Practices for the Joint Use of Wood Poles of Supply and Communications Companies," February 15, 1926; and, "Allocation of Costs between Supply and Communications Companies" published October 15, 1926. The third publication addressed the economics of joint use construction and established agreement between the parties as to
cost sharing for joint use. All three publications were reissued in their entirety in July 1945, and are provided here as WA'Exhibit No. 28.

With respect to the economics of joint use, the parties recognized that the true costs of joint use are not related to the rental rate, but rather the costs of ownership and maintenance of joint use poles. The representatives of the two industries agreed that the appropriate allocation of cost was a 50-50 ownership ratio. (See WA Exhibit No. 28, p. 42, "Ownership of Poles under a Space Rental Agreement"). The parties/industries agreed to an equal sharing of the costs of owning and operating pole plant for their mutual benefit, and by extension, to the benefit of the rate base.

EEI and the Bell System subsequently issued, in October 1951, a joint practice entitled "Joint Use of Poles in Rural Areas." A copy is attached as WA Exhibit No. 29. The report referred back to the prior 1926 practice and concluded that, as to joint use in rural areas, "Joint Use Agreements should preferably be of a type under which each of the parties shares equitably in the cost of joint poles."

What Ms. Kravtin has proposed is not a sharing of the economics of joint use, nor is it a formula under which Charter would pay for the cost of the poles or portions of the poles it uses. Instead, she offers only a token rental payment, equivalent to $7.41 \%$ of the costs of ownership, even though her client, Charter, is one of only 2.35 attachers on the pole, on average. Charter, now provides all the same enhanced services, at similar rates as local telephone company. With respect to cost avoidance, her proposal would
create a cost avoidance of $92.6 \%$ of the costs associated with the ownership of poles.

## II. THE TVA RATE FORMULA

Q. MS. KRAVTIN ASSERTS THAT "THE OUTLIER TVA APPROACH IS HIGHLY FLAWED AND WAS DEVELOPED EXPRESSLY TO SERVE THE LIMITED INTERESTS OF ITS POLE OWNING CUSTOMERS IN CHARGING THE HIGHEST POSSIBLE POLE ATTACHMENT RATES." DO YOU AGREE WITH HER STATEMENT?
A. Absolutely not. TVA fully explained its goals and rationale in the 2016 resolution adopted by the TVA Board of Directors. (Exhibit WA-3). Specifically, TVA stated that its goal was "to insure that electric systems are being appropriately compensated for use of the electric system assets." As the TVA observed, "[f]ailure to do so has a direct impact on the retail rates charged by LPCs because electric rate payers will be forced to subsidize the business activities of those entities attaching to the assets of LPCs [that is, their poles] for non-electric purposes.' The other published statements in support of the adopted resolution speak for themselves-it is clear TVA's intent was to protect electric rate payers from subsidizing communications attachers.

If the intent of the TVA Board of Directors was to generate the "highest possible" pole attachment rates, as Ms. Kravtin alleges, there are
other formulas and methods it could have adopted that generate higher rates than that ultimately approved by the TVA. For instance, The APPA rental model described in my Direct Testimony, and WA Exhibit No. 15, using Blue Ridge financials, and a "gross calculation" as provided for in the model, produces a higher rental rate than the TVA formula. See rental calculations for Blue Ridge using that model at WA Exhibit No.s 30.1, 30.2 and 30.3 for 2014, 2015 and 2016.

The TVA formula, however, only requires a cable attacher to share $28.44 \%$ of the annual costs of a pole when there are three attachers and all the assumptions are used. And in the case of Blue Ridge, where there is only an average of 2.35 attachers per pole, Charter would only be required to share $41.25 \%$ of the annual costs of the pole when actual data is used. (See Exhibit WA-2.) This is appropriate and what one would typically expect in designing formula to fairly share the costs of the pole: When there are three attachers, a cable attacher pays less than a third of the pole costs, and when there are only 2.35 average attachers, the cable attacher pays approximately two-fifths of the pole cost. The TVA Method is also much more closely aligned with the industry practices on cost sharing and the original REA philosophy regarding joint use of poles.

TVA acted in the best of interests of electric ratepayers, and consequently developed a rental methodology that fairly allocates the costs of ownership and maintenance of poles between the owner and the users.

## Q. MS. KRAVTIN ALSO STATES THAT THE TVA METHOD IS AN "UNECONOMIC, UNTESTED, UNPREDICTABLE, AND UNREASONABLE RATE METHOD." HOW DO YOU RESPOND TO HER ASSERTIONS?

A. I disagree with all those assertions. As I explain in my direct testimony, the TVA rate formula fairly allocates pole costs among electric utilities and cable attachers based on a true understanding of how they use space on the pole in the real world. Ms. Kravtin has no experience with pole plant. Instead, she insists the Commission should adopt the FCC rate because she believes it will help achieve a public policy objective she endorses-the subsidization of broadband internet-and obviously would result in an economic benefit to her client.

The results under the TVA method are just as "predictable" as under the FCC cable rate. Under both methodologies, annual pole attachment rates will only change as cost inputs change. Those inputs are the same under both formulas. Moreover, the only basis Ms. Kravtin appears to have for asserting that the TVA rate is "unreasonable" is her disagreement with its space allocation formula, particularly its requirement that cable attachers bear an equal share of the costs of the support space, which benefits all attachers equally, and that they pay for the costs of the forty-inch Communications Worker Safety Zone, which would not be required if there were no communications attachers on the pole.

Likewise, Ms. Kravtin's assertion that the TVA rate is "untested" is simply incorrect. The TVA formula resulted from a review by a federal agency with responsibility for regulating more than 160 non-profit electric cooperatives and municipally-owned utilities in seven states. Its analysis is thus directly relevant here, and far more appropriate than a rate formula adopted by the Federal Communications Commission to regulate the pole attachment rates charged by for-profit, investor-owned utilities (IOUs).

## Q. IS THE TVA FORMULA CONSISTENT WITH OTHER GUIDANCE REGARDING POLE ATTACHMENT RATES CHARGED BY ELECTRIC COOPERATIVES?


#### Abstract

A. Yes, it is. TVA stated that its underlying intent was to ensure that electric cooperatives and other LPCs are appropriately compensated so their members are not required to subsidize the business of communications attachers. This is consistent with the earliest guidance provided by the Rural Electrification Administration (REA) of the US Department of Agriculture. In its early years, REA issued guidance to its member cooperatives regarding acceptable joint use contract terms, including a rental rate method, for telephone attachments. Telephone companies were essentially the only communications companies at that time.

Attached as WA Exhibit No. 31 is a copy of an early REA document titled "Joint Use of Facilities by REA Borrowers and Telephone Companies," secured from the National Archives. On page 2, the REA explains that, "even though power system poles are already in place, and can accommodate


## PUBLIC

telephone facilities with little, if any, extra cost, telephone companies should be required to make payments representing their fair share of the costs of the poles so that the savings can accrue to the consumers of electricity as well as the telephone subscribers. In other words, the power consumers should not be asked to subsidize telephone subscribers."

Thus, REA recognized long ago that communications attachers should bear an appropriate share of the full costs of the poles they use, not just the supposed "incremental" costs incurred as a result of their attachments. If not, communications attachers, like Charter here, would be able to obtain the benefit of fully-constructed, fully-maintained pole plants, constructed using capital contributed by the cooperatives' members, without fairly contributing their costs.

## Q. MS. KRAVTIN FURTHER STATES THAT THE TVA FORMULA BEARS NO RESEMBLANCE TO THE FCC CABLE RATE FORMULA. DO YOU AGREE? <br> Absolutely not. Both the FCC and the TVA formulas are based on a three-component calculation. The first component is the historical bare pole cost, the second factor is the total of the annual charges related to the costs of ownership and maintenance of poles, and third is the space allocation for each of the parties. The dispute arises only as to the third element - the allocation of space (or cost responsibility) that each party includes in their rental method. As I have explained before, the FCC Cable Rate requires cable attachers to pay for only a small amount of the "Support Space" necessary to install the

pole in the ground and achieve ground clearance, even though all attachers benefit equally from this space. It also allocates the forty-inch Communications Worker Safety Zone, needed to provide separation between communications attachments and electrical facilities, entirely to the electric utility, even though this space is needed solely to protect communications works and would not be required if communications attachers were not on the pole.
Q. MS. KRAVTIN ASSERTS IT IS INAPPROPRIATE FOR THE TVA FORMULA TO ALLOCATE COSTS OF THE SUPPORT SPACE ON A "PER CAPITA" BASIS, BECAUSE POLE OWNERS GET THE

BENEFIT OF "OWNERSHIP RIGHTS" IN THE POLE, WHILE COMMUNICATIONS ATTACHERS DO NOT. DO YOU BELIEVE OWNERSHIP OF THE POLE IS A REASON NOT TO ALLOCATE THE COSTS OF THE SUPPORT SPACE ON A "PER CAPITA" BASIS?
A.

Absolutely not. The TVA Method allocates the costs associated with the various portions of the pole to the parties that occupy and benefit from that space. As I have stated multiple times, all parties require, and benefit equally from, the common space (the portion of the pole buried in the ground for stability and the portion necessary for minimum ground clearance to comply with the NESC).

In her testimony, Ms. Kravtin, argues that the Support Space ought to be allocated in the same way that common area maintenance charges are
allocated in typical commercial leases-and that a tenant who leases one story in a ten story building should only have to pay ten percent of the common area charges. Ms. Kravtin's example, however, does not reflect how poles are actually used in real life. All pole owners must have the Support Space to establish ground clearance, and they use that space even if there are no other attachers on the pole. Thus, if Charter constructed its own poles, it would need the full Support Space-not just a percentage of it. A better example therefore would be a building where no tenant will rent space unless it is at least ten stories off the ground and where each tenant insists that the first ten stories remain vacant. Accordingly, Ms. Kravtin's building example simply does not reflect reality.

Moreover, Charter uses the Support Space on a regular basis to attach risers, communications boxes, and amplifiers, and its employees and contractors use the Support Space as climbing space to install and maintain Charter's facilities. Ms. Kravtin's insistence that Charter only uses one foot of space, or possibly even less, fails to account for these uses of the Support Space.

As to Ms. Kravtin's comments about the advantages being a pole "owner": Ownership also comes with responsibility. The pole owner is also responsible for the maintenance, taxes, rights of way maintenance, insurance, record keeping, and eventual replacement at the end of a pole's service life. While a pole has a definite service life, the pole location is (essentially) there in perpetuity. This means the responsibilities of the pole owner never go
away. For instance, even if Charter pays to install a taller pole, Blue Ridge incurs the ensuing maintenance costs, and is fully responsible for replacing the pole at the end of its service life, even though the pole is taller and more expensive than Blue Ridge would need for its own its own purposes.

If pole ownership was such a great thing, I am certain that Charter would construct and own a large number of poles, but obviously it has not chosen to do so.

## III. APPLICATION OF THE TVA RATE FORMULA TO BLUE RIDGE A. USE OF ACTUAL FIGURES -POLE ATTACHMENT RATES Q. WHY DID YOU USE ACTUAL FIGURES IN CALCULATING A POLE ATTACHMENT RATE FOR CHARTER'S ATTACHMENTS TO BLUE RIDGE'S POLES INSTEAD USING THE ASSUMPTIONS IN THE TVA FORMULA?

A. TVA adopted its formula for use by $160+$ LPCs across the seven-state area served by TVA. The level of detail those LPCs keep in their records varies, and many do not have sufficient data to determine the average number of attachers, average pole height, or whether the LPC's average span between poles requires more or less support space. Blue Ridge has sufficient data to obtain this information, and so it is appropriate to use real figures to generate a rate that more accurately reflects Blue Ridge's actual pole plant as opposed to relying on assumptions.

Indeed, the TVA Board recognized that it is appropriate to use actual figures regarding a power company's poles where they are available when it
adopted the TVA formula. (See Exhibit WA-3, at p. 4 (approving use of actual data for average pole height and appurtenance factors)). Ms. Kravtin has also testified in prior cases before the Commission involving Charter's affiliate, Time Warner Cable Southeast, LLC, that it is appropriate to use actual data for space allocation figures where it is available and that the FCC Cable Rate approves of doing so. (See WA Exhibit No. 32 ("As with any presumptive value in the formula, to the extent there is actual (or statistically significant) utility or attacher specific data to support use of alternative space presumptions those can be used in lieu FCC's established space presumptions . . . .')).
Q. YOU TESTIFIED BEFORE THE COMMISSION ON BEHALF OF SEVERAL COOPERATIVES IN A CASE AGAINST CHARTER'S AFFILIATE, TIME WARNER CABLE SOUTHEAST, LLC. WHY DID YOU NOT USE ACTUAL AVERAGE POLE HEIGHT, APPURTENANCE FACTOR, OR SUPPORT SPACE FIGURES IN THAT CASE?
A. The cooperatives in those cases did not have sufficient data to determine actual figures for their system. For instance, instead of listing how many poles of each height and class were in their system, only one of those cooperatives had data in its CPRs with specific pole height data. The others merely listed the number of poles by categories of poles, such as poles that were " 35 feet and under," which is a common practice. Blue Ridge, however, breaks down all of its poles by height in its continuing property records. It
also has sufficient data to determine actual figures for each of the assumptions I have rebutted in calculating a pole attachment rate under the TVA formulaaverage number of attachers, average pole height, appurtenance factor, and required Support Space.

## Q. WHICH PRESUMPTIONS IN THE TVA FORMULA HAVE YOU REBUTTED WITH ACTUAL FIGURES?

A. First, I have used the actual average of attachers on the poles in Blue Ridge's system that have communications attachers- 2.35 attachers-rather than the assuming there are three attachers. I have also used (1) the actual average distribution pole height of $36.83^{\prime}, 36.85^{\prime}$ and $36.87^{\prime}$ for 2014,2015 and 2016 respectively, (2) a "bare pole" or, appurtenance factor, of $87.0 \%$, $87.29 \%$ and $87.41 \%$ for 2014,2015 , and 2016, respectively; (3) an "occupied" space allocation of 1.11 ' for Charter in all 3 periods; and (4) an allocation of a greater support space, $27.3^{\prime}, 27.28^{\prime}$ and $27.2^{\prime}$ for 2014,2015 , and 2016, which is required to maintain ground clearance given the longer than average span length between poles on Blue Ridge's system.

## B. SPACE ALLOCATION USING ACTUAL FIGURES

## Q. WHAT HAPPENS TO THE SPACE ALLOCATION PERCENTAGE

 UNDER THE TVA FORMULA WHEN THESE ACTUAL FIGURES ARE USED?A. As I said before, by default, the TVA formula allocates $28.4 \%$ of the annual pole costs to a cable attacher when there are three attachers on a pole (an electric utility, a telephone company, and a cable attacher). However,
because there are only 2.35 average attachers on the poles in Blue Ridge's system that have communications attachments. Thus, there are fewer attachers to share the costs of the pole. When the actual number of attachers is used along with the other figures described above, Charter's actual space allocation percentage increases to $41.25 \%$ for FY 2014, 41.21\% for FY 2015, and $41.16 \%$ for FY 2016. (See WA Exhibit No.s 2.1 - 2.3).

## Q. DO YOU BELIEVE THE SPACE ALLOCATION FACTOR THAT

 RESULTS FROM USE OF ACTUAL FIGURES IS FAIR?A. Yes. When there are three attachers and all the assumptions are used, the TVA formula allocates less than a third of the costs of the pole- $28.4 \%$ to a cable company. That figure is fair and about what you would expect when there are three attachers. In Blue Ridge's case, the result is approximately $41.2 \%$, or just around two-fifths, which is about what you would expect when there are only 2.35 attachers.

## C. BLUE RIDGE'S POLE COSTS

Q. WHAT WERE BLUE RIDGE'S AVERAGE ANNUAL DISTRIBUTION POLE COSTS FOR 2014, 2015, AND 2016?
A. Based on the figures shown in WA Exhibit Nos. 2.1-2.3, Blue Ridge's average annual pole costs for distribution poles (including maintenance and other carrying charges), were // BEGIN CONFIDENTIAL // //END CONFIDENTIAL
Q. DO THESE FIGURES REFLECT THE FULL COSTS OF THE POLES TO WHICH CHARTER HAS ATTACHED?
A. While these figures reflect the annual costs of the distribution poles to which Charter has attached (as shown in Blue Ridge's accounting records kept in accordance with Rural Utilities Service ("RUS") standards and generally accepted accounting principles) they do not reflect the actual full cost of the poles to which Charter has attached for at least two reasons: (1) These figures only reflect the annual costs of Blue Ridge's distribution poles. However, as I stated in my direct testimony, the 2015-16 pole attachment inventory shows that Charter is attached to at least 442 transmission poles on Blue Ridge's system, which cost many times more than distribution poles. (2) Because of the accounting methods used to retire poles from Blue Ridge's books as they are removed or replaced, Blue Ridge's financial records understate the true costs of even the distribution poles in Account 364 (poles, towers and fixtures), even though they have been booked properly in accordance with generally accepted accounting standards.

## Q. ARE THE COSTS OF TRANSMISSION POLES TO WHICH CHARTER HAS ATTACHED INCLUDED IN THE TVA RATE FORMULA?

A. No. The rates I calculated under the TVA formula in my direct testimony only take into account the cost of distribution poles, not transmission poles. RUS requires its borrowers, such as Blue Ridge, to keep their books in accordance with uniform system of accounts. Account 364,
which is used to calculate pole costs under both the TVA and the FCC formula, only includes the cost of distribution poles. Transmission poles are booked in a separate account (Account 355).
Q. IS THERE A SIGNIFICANT DIFFERENCE IN THE COSTS OF TRANSMISSION AND DISTRIBUTION POLES?
A.

Absolutely. As I explained in my direct testimony, in 2016, Blue
Ridge's average installed cost of a transmission pole was // BEGIN CONFIDENTIAL //
// END

Q DO ANY OF BLUE RIDGE'S OTHER AGREEMENTS WITH ATTACHERS INCLUDE A SEPARATE TRANSMISSION RATE?

Yes. Blue Ridge's 2002 agreement with SkyBest includes an $\$ 83.50$ per pole rate for attachments to Blue Ridge's transmission poles. (See WA Exhibit No. 34, Article 8). I also know of IOUs that charge separate rates for attachments to transmission poles. For instance, I know that

## Q. DOES THE RUS ACCOUNTING METHOD RESULT IN THE VALUE OF BLUE RIDGE'S DISTRIBUTION POLES BEING UNDERSTED?

A.

As I said above, Blue Ridge's financial records, which are audited annually and filed with RUS on Form 7, correctly reflect the costs of Blue Ridge's poles as they were booked in Blue Ridge's accounting records using the accounting process originally developed and approved by the Rural Electrification Administration (REA). However, the REA method of retiring
poles from the plant significantly understates the asset base related to Account 364, (Poles, Towers \& Fixtures), and other distribution accounts as well.
Q. COULD YOU PLEASE EXPLAIN WHY YOU BELIEVE BLUE RIDGE'S AVERAGE NET POLE COST IS UNDERSTATED?
A. The original method developed by REA for retiring poles from a cooperative's books when they were removed or replaced involved "average" unit values. This system was developed in the 1930s, an era when the cooperatives had limited accounting personnel and when plant costs were stable and there was little inflation. REA and the cooperatives selected this accounting system because it required minimal record keeping to maintain. Under this system, each time the cooperative adds a pole to its books, the pole's cost is added to all the others in the account. However, when a pole is retired from the account, it is retired at the then-current average of the value of all poles in the system-even though the actual value of the pole being retired, which was installed many years ago, is likely much less than the average. The result is that, over time, the value of a cooperative's pole account ends up being understated.

## Q. DO THE INVESTOR-OWNED UTILITIES AND ILECS USE THIS METHOD OF RETIREMENT ACCOUNTING?

A. No, both IOUs and ILECs use "vintage retirement" accounting. I know this because of my experience representing IOUs and also through 30 years of service at BellSouth Telecommunications, Inc. Under a "vintage" system, when a pole is retired and taken off the books, it is "retired" at the
same cost at which it was installed. If a pole was installed 20 years ago for $\$ 100$, that same amount will be removed from the account (364 for IOUs or 2411 for ILECs) when the pole is retired. In comparison, under an "average" retirement system, a pole installed twenty years ago by a cooperative for $\$ 100$ would be retired at a current average value of $\$ 300$ in this example. IOUs utilize vintage accounting processes for obvious reasons.

## Q. WHAT DOES THE USE OF AVERAGE RETIREMENT MEAN FOR THE VALUE OF A COOPERATIVES' POLE PLANT?

As the installed cost of plant rises, an "average retirement cost" system materially understates the value of a cooperative's pole plant. Typically, older poles are retired first, and when an older pole is removed at an inflated retirement value, the remaining balance for the account is eroded. RUS has stated that where RUS borrowers have performed system wide inventories to establish "vintage retirement record systems, the existing recorded plant values have ranged from $50 \%$ to $65 \%$ of the original cost." (See WA Exhibit No. 35, 1998 Correspondence between R Nichols, CPA, Auditor for Georgia Electric Membership Corporation, and RUS Program Accounting and Regulatory Analysis).

## Q. AND WHAT IS THE IMPORTANCE OF THIS ACCOUNTING METHOD IN THIS PROCEEDING?

A. Under all cost-based formulas-including both the FCC Cable Rate and the TVA formula-the first input into the formula is the "average net bare pole cost." Blue Ridge has historically used the REA/RUS "average"
accounting method for tracking pole costs in their continuing property records. Therefore, I am confident that Blue Ridge's pole costs are significantly understated. Blue Ridge is currently considering whether to commission an accounting study to determine the impact of this accounting method to determine what action should be taken.

## IV. THE FCC CABLE RATE IS INSUFFICIENT TO COMPENSATE BLUE RIDGE AND IS AN OUTLIER AMONG ACCEPTED RATE METHODOLOGIES

Q. RETURNING TO MS. KRAVTIN'S TESTIMONY, SHE ASSERTS THE TVA RATE FORMULA IS AN "OUTLIER." IS THAT CORRECT?
A. The FCC Cable Rate is actually the outlier.
In my direct testimony, I described a number of accepted rate
formulas used by pole owners or approved by different jurisdictions around
the country. These include (1) the American Public Power Association rate
(the "APPA Rate"), which is based on rates adopted in court proceedings in
Seattle, Washington; (2) the "Telecom Plus Rate" considered by the United
States House of Representatives (3) the rate methodology adopted by the
Arkansas Public Service Commission (the "Arkansas Rate"). (See Direct
Testimony of Wil Arnett, pp. 25-35).

Exhibit WA-24 includes diagrams comparing the space allocation percentages under each of these formulas to the percentage allocated under the TVA and Cable rate. As this exhibit shows, assuming there are three attachers, the space allocation percentages under these formulas range from

## PUBLIC

$18.9 \%$ in the case of the Arkansas Rate to $27 \%$ in the case of the APPA rate. This places the FCC Cable Rate, which allocates only $7.4 \%$ of the costs of the pole to the cable attacher, on the extreme low end of the range.

I have also prepared calculations showing the annual pole attachment rates that would result under each of these formulas, which are set forth in WA Exhibit No. 33. Once again, the comparison shows that the FCC Cable Rate is the significant outlier. These formulas produce pole attachment rates using 2016 data that range from $\$ 17.05$ dollars per pole in the case of the Arkansas Rate to $\$ 28.54$ in the case of the APPA Rate-which is even higher than under the TVA rate formula. In contrast, the FCC Cable Rate would result in a rate of $\$ 5.33$ per attachment using the formula's assumptions (see WA-Exhibit No. 2.5), and a rate of $\$ 8.31$ when using actual data.

Thus, if anything, the FCC Cable Rate, and its exceptionally low, subsidized rate, represents the "outlier" approach.

## Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A.
Yes.

BY MS. HARDEN:
Q Did you prepare a summary of your direct and rebuttal testimony, Mr. Arnett?

A Yes, ma'am, I did.
Q Would you please present that summary to the Commission at this time?

A Yes, ma'am. I'm Will Arnett and my experience working with outside plant communications and power distribution systems goes back 51 years, including management of joint use and third-party pole attachment agreements. I started work for BellSouth. It was Southern Bell at the time in 1996 -- I'm sorry, 1966, October of that year, and I had 30 years with BellSouth including eight years managing joint use or what was known as the north sector of BellSouth which included the States of North Carolina, South Carolina, and Georgia. I retired from BellSouth in 1996 and have been consulting for the last 21 years on -with pole owners on joint use and third-party attachment issues. I have negotiated joint use agreements and pole attachment agreements on behalf of investor-owned utilities, municipal power systems, and electric co-ops throughout the
southeast and as far as north as Maryland. I counted my customers, pole owners that own over 12 million poles in the southeast United States and the midwest.

I've testified in many proceedings involving joint use matters and pole attachment matters and I've negotiated statewide agreements on behalf of Georgia EMCs and ALEC, the Association of Louisiana Electric Cooperatives, with Charter in 2008 and in 2009, respectively. The purpose of my summary is to provide a reasonable expectation of why the Commission should adopt the TVA rental rate methodology and explain why that methodology and not the FCC cable rate methodology results in a fair and reasonable pole attachment rate for Charter on Blue Ridge's system. With respect to the rate methodology that was created and approved by TVA in February of 2016, that methodology is used to regulate 160 plus electric co-ops and municipal power providers known as local power companies to TVA in its seven state territory in the southeast. Four of those local power companies serve members in North Carolina,
including the three co-ops of Tri-State, Mountain Electric, Blue Ridge Mountain Electric, and the City of Murphy. I will tell you that the characteristics of the TVA co-ops, especially in North Carolina, are very similar to those of Blue Ridge.

The TVA rate methodology is the only federal agency approved rate methodology for electric co-ops. The -- I'm going to -- during my summary as I did in my testimony, I'm going to compare the TVA rate methodology to FCC rate methodology. And the first two comparisons are very simple, the historical net bare pole cost which goes into the formula and both FCC and TVA formula is identical. Those numbers are determined from Blue Ridge or any other electric co-ops continuing property records and their financials.

The second component which is the average annual carrying charge which is an accounting for things like maintenance, and taxes, and depreciation, and administrative costs, and a rate of return are also similar in both methods. Those two components for Blue

1

Ridge for year end 2016 are $\$ 258.30$ for its average pole cost net of accumulated depreciation and 24.98 percent attributable through those poles from those five components that I mentioned. Those two numbers multiplied together tell us that it costs Blue Ridge $\$ 64.52$ a year on average to keep a pole in plant and operational.

The third component of these two formulas is where the difference arrises. The difference is in how the two formulas allocate the costs of -- the annual cost among the users. I have two exhibits -- we've talked a lot about how these things work on the pole -- I have two exhibits and, Mr . Chairman, if I could, I'll get up and use the exhibits to show how these two formulas work, and the different spaces on the pole. These are 5-foot scale models of a utility pole that we created.

MS. HARDEN: You need to face the Commission so the court reporter can hear you.

CHAIRMAN FINLEY: And pull that microphone over there close to you, as close to you as you can, please.

A Thank you. I'll try to project my voice, too.

These two poles represent the standard utility pole under the basic assumptions of both formulas. They are really -- we've color coded the different sections on the pole, but we've talked a lot today about the support space on a pole. Let me show you that the support space starts at the ground, actually it starts below the ground. It's the six feet of the pole in the ground and it's under the TVA and the FCC assumptions, it's 18 feet to the first point of attachment. The next section that needs consideration is what's called the usable space on the pole. It goes from the point of attachment to the very top of the pole. Under both the FCC cable methodology and the TVA methodology, that's assumed to be thirteen and a half feet. Twenty-four feet from the first point of attachment to the bottom of the pole and then thirteen and a half feet from the point of attachment to the top, that's a 37 and a half foot pole. The usable space is divided up in -under the -- under both methods and the two-foot space for the telephone company shown by this purple, a one-foot space for the communications,
cable company. And then this area is called a communications worker safety zone, that's a 40 -inch space or 3.33 feet, and it is not necessary on this pole until one of these two attachers is introduced to the pole. The top 7.17 feet under both formulas belongs to the power company for its use, it's called the supply space.

Now, any questions about the pole and how it's divided up? Okay. The -- I should add also that this support space is not just support for the cables that are attached here in the communications space. The support space supports risers which are transitions from underground cable or underground facilities to overhead facilities. It supports equipment and hardware. When I was with the telephone company we always mounted our terminals on the sides of the pole right here so that we could make connections for services. It supports Charter's power supply right here and right here. That's what we saw in these earlier pictures. It supports Charter's risers, and I observed Charter's risers and their power
supplies on Monday of this week in Lenoir, North Carolina. They run from meter base and a meter which Charter owns that's mounted below the power supply all the way up here through the communications worker safety space to a weather head which Charter also owns. So this support space and even this part, the communications worker safety space, is used by Charter and by anybody else needing commercial power on the pole. It's used -- this area is used. And when I was a technician with the telephone company I used this area for climbing so it's used, it's important, it's usable. Now the way the two formulas work --

CHAIRMAN FINLEY: You climbed those poles yourself?

THE WITNESS: I did, yes, sir. I got reported one time for being a child playing on a pole when $I$ was 18 years old and they sent a newspaper man. I swear.
(Laughter)
A I'd like to show you -- give you a feel for how the communications space and the other spaces are allocated under the two formulas. The TVA
formula recognizes that this support space is a benefit to everybody so the red markings at the bottom of the pole are an actual representation of 28.44 percent of the pole along with this area assigned to Charter and one half of the communications worker safety space. So the red that you see here shows the percentage of the pole that's used and allocated to a third-party attacher under the TVA formula.

This is the FCC cable formula. The FCC cable formula would take one foot in the usable space on the pole and divide that one foot by this portion of the pole from the first point of attachment up to the top including the communications safety zone, communications worker safety zone, it would divide this one foot into that thirteen and a half and it gets 7.44 percent of the pole using all the basic assumptions as the method of calculating the rent that Charter would pay. So these are our two models. They're also depicted on the screen here. One foot, I mean, 7.44 percent -- really the way the formula works is they pay 7.44 percent of the pole annual carrying cost. And that means Blue Ridge on a
two-party pole, under the FCC formula, would pay 93 percent, 92.6. So these are the models. Anybody have any questions?

CHAIRMAN FINLEY: Well, you better save your question for later so.

MS. HARDEN: Yes.
THE WITNESS: Yes, sir. Thank you for letting me --

A So, in summary, as I said in my testimony, TVA rate, the TVA method allocation cost based on the space that the cable companies actually use and benefit from. The cable company pays for one foot of attachment just like the FCC formula. It splits the communications worker safety space equally among the communications attachers on the pole and it considers -- the TVA formula considers that everybody benefits from the support space on the pole so they share equally. If there are three parties on the pole, they are one-third.

Now, the FCC cable rate, however, just uses one foot of space out of the usable and allocates the entire cost of the pole. That's $\$ 64.52$ that I mentioned earlier. It

NORTH CAROLINA UTILITIES COMMISSION
would allocate the costs in the form of rental rate to Charter based on that 7.4 percent (sic).

Now, these poles are based on the assumptions in the models. That's not exactly what we have with Blue Ridge. For instance, Blue Ridge does no have an average pole size of thirty-seven and a half. We were able to determine from Blue Ridge's continuing property records that their average pole height is not thirty seven and a half, it's 36.87 feet. It's shorter. We have a lot of 35 -foot poles and 30-foot poles on the system. Charter -- as we discussed earlier I believe, Charter completed an attachment inventory in 2015 and 2016, and Charter has records of how many people are attached and where they're attached. The way the average attaching entities calculation is done, only poles that have a foreign attachment are included in the total. So a pole with just Blue Ridge does not go into the base, but for those poles that have multiple attachers, One Communications and Blue Ridge, the number is not three attachers on Blue Ridge's system, it's 2.35. The inventory also told us that there are
about 2700 poles that Charter has more than one attachment on. So on average Charter is not using one foot of space as the model assumes, but instead they're using 1.11 foot of space. The other way of doing this calculation would be to take the 2700 poles where they're using two feet of space and come up with a rate for that and the remainder of the poles to come up with a one-foot rate, and then you'd have to keep records forever of how many of those were out there. I can tell you mathematically it's exactly the same thing to come up with an average space utilization when you come up with a per pole rate and I've done those calculations myself.

The other thing -- I'm going to
step off one more time. The other thing that we need to understand is that these aren't typical poles at Blue Ridge like you would consider in a model for IOU. Blue Ridge's poles are much further apart, 257.01 feet in my original calculation -- 257.01 feet in my original calculation, I was off by three inches because I didn't consider those joint use poles that they're attached to. So it's really -- and the
net effect on that is it means the sag is about one inch less at mid-span.

So the difference in the two
formulas: We've said already that the annual carrying cost for a Blue Ridge pole is $\$ 64.52$. Under the TVA formula that rate is -- the rental rate to Charter would be $\$ 26.56$ using actual data, not the rebuttable presumptions. The FCC cable rate using all of the -- using the rebuttable presumptions in their present form without rebutting those, that calculates to \$5.22. We agree with Ms. Kravtin's calculation on that. But if you use all of the actual data and use the FCC cable, the FCC cable formula, the attachment rental rate on a per-attachment basis, not a per-pole basis, on a per-attachment basis is \$8.31.

So I would wrap this summary up by just going back to what TVA said when it adopted the TVA rental rate formula, it said a lot of things but most important to me was it said, TVA seeks to ensure that electric systems are operated for the benefit of electric consumers and that electric rates are kept as low as
feasible ensuring that the electric co-ops are appropriately compensated for the use of the electric system assets is important to achieving these goals. Importantly, failure to do so have a direct impact on retail electric rates because electric ratepayers will be forced to subsidize the business activity of those entities that are utilizing the electric system assets. One other thing they said, unlike the FCC, however, TVA is charged with keeping electric rates as low as feasible and assuring that -- ensuring that electric ratepayers do not subsidize the other business activities. That's all I have, Mr. Chairman.

MS. HARDEN: Chairman Finley, the witness is available for questioning.

CHAIRMAN FINLEY: Cross examination.
MR. GILLESPIE: Thank you, Mr. Chairman. As a preliminary matter, Mr. Chairman --

CHAIRMAN FINLEY: You need to pull that mic up there, Mr. Gillespie.

MR. GILLESPIE: As a preliminary matter, Mr. Chairman, we would move to strike the rebuttal testimony at page 20, line 1 through line 16.

NORTH CAROLINA UTILITIES COMMISSION

CHAIRMAN FINLEY: Too late. Motions to strike have to be filed five days before he testifies so just save it.

MR. GILLESPIE: Mr. Chairman, I would note for the record that we received the rebuttal testimony on Monday.

CHAIRMAN FINLEY: All right. Make your motion.

MR. GILLESPIE: I move to strike on page 20, line 1 through line 16 , and page 21 , line 17 --

CHAIRMAN FINLEY: Hold on. Let me get -keep up with you. Start over again, please, Mr. Gillespie.

MR. GILLESPIE: We're moving to strike page 20, line 1 through 16.

CHAIRMAN FINLEY: Let me get to page 20. 16 line --

MR. GILLESPIE: And line -- excuse me. And page 21, line 17 through page 24, line 5. And also an associated exhibit called WA-35.

CHAIRMAN FINLEY: And your grounds?
MR. GILLESPIE: This testimony and the exhibit involves correspondence in 1998 between a private accountants and the assistant administrator at

USDA about an accounting issue for co-ops. It's improper rebuttal. It's not responding to anything that was said in the responsive testimony by Charter. If the -- Blue Ridge felt this was an issue it should have been in their direct. It's not prohibitive. It's simply two people talking about whether co-ops should consider a change in accounting to more accurately reflect pole investment. There's no testimony from the co-op here about whether Blue Ridge adopted this recommended change in accounting and if not why not, and this was almost 20 years ago.

MS. HARDEN: May I be heard?
CHAIRMAN FINLEY: Sure.
MS. HARDEN: This is included because we did not want this Commission to be surprised in two or three years if co-ops in North Carolina changed their accounting methodology. North Carolina's co-ops, like others in RUS, do not use the same type of accounting procedures as a Duke Energy and the independently owned IOUs or even the telephone co-ops. Their accounts that reflect the base cost of distribution poles and of these carrying charges are done on what is called an average retirement methodology, which means that if you built a pole -- if you put that pole
in in 1980 and it cost $\$ 300$ and a car runs into it and we put in a new one and it cost $\$ 1000$--

CHAIRMAN FINLEY: Hold on a minute.
MS. HARDEN: Yes. We want you to understand the methodology.

CHAIRMAN FINLEY: Hold on a minute. Hold on a minute. I wish I had advance notice of this argument we're going to have here. That's why we have the rule that says you've got to do this in advance. So what I'm going to do, I'm going to allow this testimony provisionally and then reserve ruling on what to do with it until $I$ hear your arguments. Okay. So we can -- so you can put it in. Provisionally you can question on it provisionally and I -- but it may be stricken once $I$ hear what your arguments are and I have a better opportunity to digest them. Okay.

MR. GILLESPIE: Yes. Thank you.
CROSS EXAMINATION BY MR. GILLESPIE:
Q Mr. Arnett, you have -- I think you said you have 51 years of experience on engineering and NESC issues; is that correct?

A Yes, sir.
Q You started as a lineman for Southern Bell in 1966.

A I did.
Q Where you worked on utility poles, correct?
A Yes, sir.
Q And you had engineering or operations positions until you retired from Southern Bell in $1996 ?$

A I did.
Q Since then, until today you've been a consultant in engineering and inspection services that involve outside plant activities; is that right?

A That and consulting on joint use matters and pole attachment agreements as well.

Q You're not an economist; is that -(Clarification was requested by the court reporter.)

A I am very sorry. My answer was yes, to all the things that Mr. Gillespie mentioned as well as doing consulting on joint use and pole attachment matters.

Q Mr. Arnett, you're not an economist, correct?
A No, sir, I'm not. I have an employee that has an MBA and has a degree in economics. And I routinely evaluated economic studies for BellSouth for outside plant additions and outside plant improvements.

Q And you're not a CPA, are you?
A No, sir. I do have a CPA on staff named
Ms. Priscilla Inman, and she reports directly to me.

Q So your CPA and your economist are not testifying
here today, you're testifying, correct?
A That is correct.
Q You're testifying as an expert on behalf of Blue
Ridge, correct?
A Yes, sir.
Q You're not a financial analyst, are you?
A No, sir, I'm not.
Q You have no professional training directly
related to rate regulation; is that correct?
A That's correct.
Q You're not a college graduate, are you?
A No, sir, I'm not.
Q You have not received any other certifications or professional degrees; is that right?

A No, sir. That's correct.
Q And you've never been qualified in any court as
an expert on pole rates, correct?
A Not in a court. I have in the Texas Public
Utility Commission. I've testified as to
attachment rental rates and my testimony was accepted there.

Q You've never been qualified in any court as an expert on any type of utility rates, correct?

A That's -- other than what $I$ just mentioned, that's right.

CHAIRMAN FINLEY: Let's speak up, folks, so we can hear you up here.

BY MR. GILLESPIE:
Q You've never been qualified before a Utility Commission as an expert on any type of utility rates; isn't that correct?

MS. HARDEN: Objection. Asked and answered. He's already testified he has.

CHAIRMAN FINLEY: Well, let's have it so we can hear what he said. Repeat your answer, Mr. Arnett.

THE WITNESS: Could I get you to repeat the question?

BY MR. GILLESPIE:
Q You've never been qualified before any Utility Commission as an expert on any type of utility rates; isn't that true?

A If you're talking about rates for electric
services, that's correct.
As of your deposition on October 25, 2017, you had not read the business court decisions in either of the Landis or the Rutherford decisions; is that correct?

A That's correct and I still haven't.
Q Do you know what rate methods were proposed by the pole owners in those cases?

A No, sir, I don't.
Q You don't know how many State Commissions use the FCC pole attachment rate method do you?

A No, sir, I don't. None that I'm familiar with use the FCC cable rate methodology.

Q So you don't know if there are approximately 15 State Commissions that use the FCC pole attachment rate method or something very close to it?

A Are you talking about for co-ops, electric co-ops?
Q My first question just has to do with general -with pole attachment rates for any entity. Do you know?

A I know that the FCC rate is -- the FCC cable rate is the rate used by investor-owns and ILEC pole
owners. And I know that on the seven -- in the seven states where TVA has control over electric co-ops they proposed this and will be implementing this TVA rate.

Q With regard to state commissions that have acted on pole attachment rate matters, how many have adopted the FCC rate or something very close for application to municipal utilities or cooperatives; do you know?

A No, sir, I don't.
Q Do you know how many states have deferred to FCC regulation of the poles in their states?

A No, sir, I do not.
Q You're not familiar with any cost allocation methods used by the North Carolina Utilities Commission for regulated services; isn't that true?

A You're talking about electric rate services?
Q Any type of regulated services.
A No, sir, I'm not.
Q You don't know what methods the North Carolina Utilities Commission uses in determining just and reasonable electric rates; isn't that true?

A I know they have multiple rates for different
classes of service, but how those rates are developed, I would assume that they are the result of testimony by the electric utilities and hearings by the Commission, and then the rates determined.

Q And you don't know what methods the NCUC uses to determine those just and reasonable electric rates; is that right?

A No, sir, I don't.
Q And you don't know whether NCUC has ever based utility rates on benefits to the customers; is that right?

A I'm not aware of any type of decision like that.
Q And you don't know whether other state utility commissions have based utility rates on benefits to the customers; is that right?

A No, sir, I don't.
Q And you don't know whether the NCUC in any case has allocated common costs on a per-capita basis; is that correct?

A No, sir, I don't. But $I$ know that the TVA regulatory staff looked at this rate model and gave pass on that TVA pole attachment rental rate model.

Q Well my question had to do with the North Carolina Utilities Commission. Do you understand that?

A I do.
Q And you're not familiar with other ratemaking done by the NCUC; is that correct?

A That's right. That is correct.
Q And I believe you told me in your deposition that you have testified before state utility commissions on pole attachment rate matters in Arkansas, Louisiana, and Texas; is that right?

A That's correct.
Q And in Texas you testified only with regard to inputs into the methodology -- a rate formula, correct.

A That's right.
Q And in Arkansas and Louisiana you testified in
favor of a telecom plus formula; is that correct?
A I did; yes, sir.
Q And you took this formula from the NRECA tool kit; is that right?

A I did; yes, sir.
Q And what is NRECA stand for?
A NRECA is National Rural Electric Cooperative

Association.
Q And that's the National Association of Blue Ridge and other cooperatives in this state?

A It's a national association. Yes, sir.
Q The telecom plus method is only one of the rate methods described in the NRECA tool kit; correct?

A That's correct.
Q And that's the same tool kit that says that the FCC rate method is unimpeachable, correct?

A It says the FCC rental rates to rental rates are unimpeachable.

Q And that includes the FCC cable rate, correct?
A The cable rate and the '96 Act original telecom formula; yes, sir.

Q The telecom plus method uses the same cost inputs as the FCC rate; is that right?

A Say that again, please.
Q Doesn't the telecom plus method use the same cost inputs as the FCC rate?

A It does, yes.
Q And it's your deposition in the June proceeding involving the four other cooperatives, you did not recall how the safety space was allocated in the telecom plus formula; do you recall that?

A I do.
Q And the telecom rate method that you -- the telecom plus rate method that you recommended to utility commissions in Arkansas and Louisiana treat safety space as usable; isn't that true?

A That's correct, it does.
Q So now you have come -- you refreshed your memory with regard to the telecom plus rate method, correct?

A That's right. I think that came up in my deposition and I said that then as well.

Q You said that in your deposition in this case?
A I did.
Q Right. Now, the Arkansas and Louisiana proceedings you recommended that they treat the safety space as part of the usable space; isn't that true?

A I recommended that they use what was known as the U.S. House of Representatives or telecom plus formula which does leave the safety space in the usable space.

Q Now, neither Arkansas nor Louisiana adopted the rate formula you recommended; is that correct?

A Neither of those adopted the FCC cable rate

NORTH CAROLINA UTILITIES COMMISSION
either. That's correct.
Well, they did not adopt the Telecom Plus methodology that you were recommending to them; isn't that true?

A That's correct.
Q Isn't it true that no state or regulatory body has ever adopted a rate method that you've proposed?

A Actually the rate methods that I've proposed and I've reviewed were developed by either a regulatory body or in litigation. So I think the answer to that is, yes, they have been. I didn't -- I haven't created a formula.

Q Mr. Arnett, my question was whether any court or regulatory body that you're appearing before has ever adopted a rate method that you proposed to them?

A No, sir, they have not.
Q So you no longer recommend the Telecom Plus method; is that right?

A I recommend the TVA methodology.
Q And the TVA method assigns all of the costs of the safety space to communications companies and it derives a higher rate than the Telecom Plus

NORTH CAROLINA UTILITIES COMMISSION
method; is that right?
A Yes, it does.
Q And it's your position here that the Commission, this Commission, should use the same rate method here as in the June cases, and that should be the TVA method; is that right?

A I do recommend the TVA method; yes, sir.
Q Are the decisions of the Business Court and the Court of Appeals in Rutherford and Landis relevant in this proceeding do you think?

A I'm not familiar with what those decisions were. I believe they accepted the FCC cable rate. But I also believe the law has changed in North Carolina to remove any reference to the FCC cable rate. So I think this hearing should stand on its own.

Q You understand that the Law in North Carolina provides that the Commission may look at any rates that have been previously adopted, correct? Do you understand that?

A I believe that's correct. Yes, sir.
Q And that would include the rates adopted in the Rutherford and Landis decisions, correct?

A I would expect the Commission would look at
previous rates that were adopted.
Q Now, you refer to the House of Representatives' method which I think you've used as a synonym for the Telecom Plus rates; is that right?

A Yes, sir.
And in the 1990's Congress was considering extending jurisdiction of the $\operatorname{FCC}$ to regulate communications attachment -- attachments other than cable operator attachments; is that right? You said in the '90's?

Yes.
A Yes.
Q And the House of Representatives at that time was prepared to accept a Telecom Plus methodology for certain types of communications attachments, right?

A I'm not sure I know the motives of the U.S. House of Representatives.

Q The Senate meanwhile offered a different methodology; isn't that true?

A I understand that they offered the FCC cable rate.

Q And ultimately Congress agreed to what we call the FCC telecom formula for communications --
certain types of communications attachments; is that right?

That's correct.
And the FCC has interpreted that methodology to derive a rate that is almost identical to the FCC cable rate; isn't that true?

A Under the latest revisions, that's correct.
Q So the FCC telecom formula relies on the same calculations of average pole costs and the same inputs as the FCC cable rate; is that correct?

A That's correct.
Q And it treats the safety space as usable, correct?

A It does. Yes.
Q And it allocates the cost of that space on the same basis as other portions of the usable space, correct?

A That's correct.
Q And it allocates one-third of the common space directly to the pole owner and allocates the other two-thirds on a per capita basis, correct?

A It does.
Q And, as I said, this has now been interpreted by the FCC in a way that approximates the FCC cable
rate, correct?
A That's my understanding; yes, sir.
Q Now, at your deposition you did not recall how the FCC achieves that result. Do you recall that?

A I do.
Q Do you know now how the FCC achieves that result?
A No. I don't remember exactly how that's done.
Q You talk about the APPA method, right?
A Yes, sir.
Q And you talked about it in the June cases as well as in this case, correct?

A I did.
Q What does APPA stand for?
A APP (sic) is the American Public Power Association. And it's a national association for municipal power providers just like NRECA is for electric co-ops.

Q And it's a trade association that represents municipally-owned power entities, right?

A I would assume it does. Yes.
Q Like the National Cable/Telecommunications Association represents cable operators, right?

A Right.

Q And it lobbies for them and it does other things for its members, right?

A I would assume that's correct. Yes.
Q Now, the APPA has developed a pole attachment rate method, right?

A Yes, sir.
Q And the APPA relied in adopting that rate on a decision of a state court in Washington --

A State of Washington. That's correct.
Q And that court -- well, let me ask you this. You're not aware of any other Commission or court that has adopted the so-called APPA rate method; is that right?

A I am not aware of any others. I know it's been used in numerous contracts by municipal power providers.

Q But it hasn't been accepted by any other Commission other court, right?

A I don't -- I don't know the answer to that, Mr. Gillespie.

Q You're not aware of any then?
A No, sir, I'm not.
Q And the State of Washington court was interpreting a particular State of Washington

Statute in its decision; isn't that correct?
A That's my understanding.
Q And the APPA method treats the safety space as unusable or common space, correct?

A May I look back at my book?
Q Certainly, if you need to.
A I'm not sure if it doesn't allocate -- no, it does put that in the common -- in the -- let me look.

MR. GILLESPIE: Mr. Chairman, while we're waiting for the witness, could I ask that the diagrams that Mr. Arnett used in his opening remarks be removed. I will talk to him about them later but I find them distracting, and I believe that they're quite incorrect.

CHAIRMAN FINLEY: Do you want to move them? Do you mind moving them?

MR. MILLEN: We'll be happy to move them. A In the APPA model it goes in the common space. BY MR. GILLESPIE:

Q Now, you said in your rebuttal testimony that the TVA rate would have been higher had it used the APPA rate method. Is that your testimony?

A Yes.

NORTH CAROLINA UTILITIES COMMISSION

Q Now, isn't it true that the Tennessee Valley PPA, the Tennessee Valley group of APPA initially recommended the APPA method and that the TVA staff initially adopted that method?

A I believe that's set out in the documentation. Yes.

Q And then, based on requests by pole owners, they decided to raise the rate further by allocating a safety space entirely to the communications attachers as the TVA method does?

A Right. And they described their rationale in the documentation for doing that.

Take a look at Exhibit Number WA-30.1 which is an exhibit to your rebuttal testimony?

A Yes, sir.
Q And this is a table that shows various rate calculations including a rate calculation of the APPA method that you have done, correct?

A $30-1$ ?
Q Yes. No, 30.
COMMISSIONER CLODFELTER: There's a 30.1 and
a 31.
BY MR. GILLESPIE:
Q I'm sorry. Look at 30.1 which is a spreadsheet.

A Yes, sir. I have that.
Q This shows your calculations --
A It does.
Q -- right? For an APPA method?
A Yes, sir.
Q And you have applied a rate of return in this rate methodology for APPA of 11.25 percent, right?

A Yes, sir. This is a 2014 calculation. And looking at 30.3 , that is a rate calculation for 2017 based on the APPA method, right?

A Using 2016 financials; yes, sir.
Q And you've used a rate of return of 11 percent there, correct?

A That's right. Yes, sir.
Q Now, go to Exhibit Number AW-33 (sic).
A Yes, sir.
Q And this is a chart that shows various rate calculations that you've made and it includes an APPA calculation, correct?

A It does. Yes, sir.
Q And in making the calculation for the APPA rate here you have used those rates of return of 11.25 percent or 11 percent, right?

A Yes.
Q And the reason that this rate shows as higher than a TVA rate is because you've applied a higher rate of return to it, and the TVA uses a .5; isn't that correct?

A I believe that's part of it and there's probably some difference because TVA uses a three-year average maintenance cost. This is also a gross calculation. It's not net of accumulated depreciation so there could be some difference there as well. I didn't try to determine exactly why the different components were different. Isn't is true that if you had applied the same rate of return to the APPA method that you applied to the TVA method that the TVA rate is higher.

A I haven't done those calculations but $I$ would expect that to be the case. It's a significantly higher rate of return.

Q And so when you say in your rebuttal testimony that TVA did not pick the highest rate, they actually did pick the highest rate; isn't that true?

A No, sir, they didn't. The model that they
used -- that $I$ used is the TVA model and it calculated rates that are lower than APPA.

Q That's because they used an 8.5 percent rate of return, right?

A That is exactly right. That's what TVA has specified.

And, if they used the 8.5 percent rate of return, the APPA rate would be lower than the TVA rate; isn't that true?

A 'That's correct, but the two models do it differently.
Q You would agree that any depiction of the APPA rate as allocating safety space exclusively to communications companies would be incorrect?

A I believe that's not the way it's done. I believe it's put in the common space.

Q All right. So if there were a depiction where the safety space for the APPA method were shown as allocating it exclusively to the communications companies that would be incorrect?

A I'd have to go back and look at APPA again, but I believe that's correct. Yes.

Q So all the rate methods -- well, let's put it this way, the rate methods used by TVA, APPA,

Telecom Plus, and the FCC method, they all allocate the cost of the usable space to the cable operator according to the percentage of the usable space occupied by the cable attachment; is that true?

A Could you repeat that, Mr. Gillespie? Sure. So the rate methods of the TVA, APPA, Telecom Plus, as well as the FCC, they all allocate the cost of the usable space to the cable operator according to the percentage of the usable space that's occupied by the cable attachment.

A They allocate the cost based on how the formula allocates the space to the capable TV operator. For instance, in TVA the cable operator is allocated one half on a three-party pole, one half of the safety space. Was I understanding your question correctly?

Q Okay. Well, let's -- that's a fair comment. The TVA method takes the safety space out and allocates it to the communications attachers; that's right -- is that right?

A That is correct.
Q And then it allocates the remainder of the safety
space, excuse me, the remainder of the usable space according to the percentage of that usable space that the cable attachment occupies, correct?

A Or the telephone attachment in that case if that's considered under the formula. Well, the cable attachment is what $I$ want to focus on now. The -- TVA, for determining what the cable company would pay, takes the space above minimum grade, takes out the safety space which it treats differently, but the rest of that usable space it allocates based on the percentage that the cable attachment occupies of that space.

A That's right.
Q And that's the same way that the APPA -- the APPA method takes the -- that space and it allocates it according to the percentage that cable attachment occupies of the usable space, right? A Yes, I believe that's right.

CHAIRMAN FINLEY: Mr. Gillespie, is it all
right with you, based on the questions you've got there, for us to take a little afternoon break? MR. GILLESPIE: Yes, sir, that's fine. CHAIRMAN FINLEY: All right. We'll come
back at quarter til four.
THE WITNESS: Thank you.
(Recess at 3:32 p.m., until 3:45 p.m.)
CHAIRMAN FINLEY: Let's come back on the record.

MR. GILLESPIE: Thank you, Mr. Chairman. BY MR. GILLESPIE:

Q Mr. Arnett, I'm going to try to make this a little simpler. That was a little more complicated than I intended. So the -- each of the rate methodologies that we were talking about, except in theory for a portion of the cost in anyway that you take space which can be used for revenue generating purposes and you figure what percentage of that is used, or foreclosed, or occupied by the attachment, correct?

A If I understand your question correctly, you're saying that each of the formulas we discussed takes the usable space at the top and figures a contribution in the form of rent based on that usable space at the top that the party occupies. Is that right?

Q Yes.
A And there are formulas that also do that to other
NORTH CAROLINA UTILITIES COMMISSION
parts of the pole as well, right?
Q Well, we're going to talk about the other parts of the pole. I'm just trying to establish that each of the methodologies we're talking about allocate some of the costs based on that theory, the space that is foreclosed from attachment by the occupancy of the attachment.

A I misunderstood where you were going. I thought you were saying that that's the only revenue generating part of the pole is at the top of the pole. And I feel like the pole itself generates revenue based on 100 percent of the pole, not just the part at the top.

Q It's all right. I'll move on. I think it's evident. So it's your belief that all of the attachers have a need for the support space, correct?

A They do.
Q And in terms of the facilities that Blue Ridge typically has on a pole, those facilities consist of primaries, and secondaries, and cross arms, and transformers, and so on, right?

A That's correct.
Q And Mr. Booth claims a need for as much as 9.5
feet of space for Blue Ridge's attachments, right?

A I believe his diagram showed 8.5 feet legacy, 9.5 feet under the new speck. Right.

Q Would you agree that Blue Ridge occupies many more feet of the usable space than does Charter?

A I think the models attest to that. I believe even under TVA it assumes the power -- the local power company would use 7.17 feet and a cable company would use one foot of space in that section of the pole.

Q Okay. Now, you talk about the REA method. And TVA does not apply its rate method to joint users; isn't that true?

A I didn't understand. You said something about REA.

Q Yes. I'm sorry. TVA does not apply its rate method to joint users?

A That is correct.
Q And these are telephone companies that share pole ownership with TVA customers, right?

A Yes. They contribute poles for TVA local power companies to use as well as using the TVA poles.

Q Now, you refer to your testimony in the June
proceeding and also here to a REA rate method. Do you recall that?

A I don't recall it's in this testimony.
Q Okay. Well, you referred to it in your June testimony. I believe it's here as well.

A No, sir, I don't think so.
Okay. You're not recommending that, are you? You're talking about REA Form 263? Yes.

A No, sir, I'm not. That's a rate methodology between the incumbent telephone company, a pole owner, and a co-op, and it's a 1954 model agreement that has a rental rate provision in it called "Share the Savings".

And that's intended for -- to be used by joint users who each own a percentage of the poles, right?

A It's intended to be used by telephone companies typical incumbent local exchange carriers and electric co-ops. Yes, sir.

Q Now, you mention the Louisiana rate method. Now, Louisiana uses the FCC rate method except that it assigns to cable 2 feet of space; is that right? A It is assigns to cable -- my understanding is it
assigns to cable one foot $\rightarrow$ for its attachment one foot of the safety space.

And the Louisiana commission adopted that rate method rather than the Telecom Plus method that you recommended to it, correct?

A Yes. And they adopted it instead of the FCC cable rate that the Cable Association recommended. It was a legacy rate that had been there for quite some time.

Q Now, you mention AT\&T and Verizon in your testimony. Do you recall that?

A I do remember mentioning them. Yes, sir.
Q And you talk about a 2008 recommendation by AT\&T and Verizon about pole attachment rates, page 31 of your testimony, right?

A You're talking about the ex parte letter from AT\&T and Verizon?

Q I believe that's what you were referring to.
A And it's in my direct testimony?
Q Yes.
A Okay.
Q Now, AT\&T and Verizon are both pole owners, right?

A They are. Yes, sir. My understanding is AT\&T
owns about 15 million poles.
Q And in 2008, when they were communicating with the FCC, they were not permitted to enjoy any of the benefits of rate regulation for their attachments; isn't that true?

A That's correct. And my understanding is they were still not considered like the cable operators.

Q So, at the time that they were trying to communicate with the FCC, making a recommendation in 2008, they were a pole owner like Blue Ridge is a pole owner or an IOU is a pole owner, right?

A They still are.
Q And they were looking for a favorable rate methodology as pole owners, correct?

A In two respects. They were looking for a way of recovering more of their pole cost from attachers. I think they were also looking for a way to reduce the rates they were paying to power companies, the IOUs, because they were not under any kind of rate regulation with IOUs. I don't know that they are today.

Q So do you know what NARUC is?
A I know the term. It's an acronym for -- I'm not
sure.
Q Do you know what it does?
A No, sir.
Q Do you know who its members are?
A No, sir.
Q Do you know how to spell it?
A $N-A-R-U-C$. Does that sound right?
Q Sounds right; in caps.
A All caps.
Q Good. Do you know if NARUC has enforced any particular pole rate methodology to be adopted by state utility commissions.

A No, sir, I don't.
Q Have you read Ms. Kravtin's testimony in this proceeding?

A Yes, sir.
Q Did you read her testimony in the June proceeding?

A I'm sure I did. Yes, sir.
Q Do you recall whether she refers to NARUC?
A I believe she does. Yes.
Q And she talks about how NARUC has enforced and advocated use of the $F C C$ cable rate methodology, correct?

NORTH CAROLINA UTILITIES COMMISSION

A I'm sure if she put it in her testimony that that's correct, that's what they've done.

Q Have you made any effort to examine NARUC's position on this matter?

A No, sir, I haven't.
Q Do you think that NARUC's position should be relevant to this Commission for its consideration?

A I choose not to tell --
MS. HARDEN: Objection. That is not relevant to this at all.

CHAIRMAN FINLEY: Well, he said he didn't know what NARUC was so that's a little bit hard -- it would be hard for him to answer that one. Let's move on.

MR. GILLESPIE: Okay.
BY MR. GILLESPIE:
Q Do you know what the National Association of State Utility Consumer Advocates is?

A I have a pretty good idea by its title. Yes, sir.

Q And do you know who they represent? Who they advocate for?

A I have no idea who their members are and who they
advocate for or what their background is with respect to pole attachments.

Q Are you aware that NASUCA has endorsed use of the FCC cable rate formula?

MS. HARDEN: Objection. He's already said he doesn't have any knowledge or awareness of this. A I don't know.

BY MR. GILLESPIE:
Q The FCC cable rate methodology has been around since the early 1980's; is that right?

A It's been around since the 1978 Cable Act I believe.

Q And I believe that you indicated you don't know how many states -- well, I'll put it this way, you don't know whether the FCC rate methodology applies to pole owners in 45 states?

MS. HARDEN: Objection. Asked and answered. CHAIRMAN FINLEY: I think we've covered that one already.

MR. GILLESPIE: All right.
CHAIRMAN FINLEY: Objection sustained. Next question.

MR. GILLESPIE: Yes, sir.

NORTH CAROLINA UTILITIES COMMISSION

BY MR. GILLESPIE:
Q The FCC rate method relies on all the same costs as the TVA applies to, correct?

A Yes. It uses the historical net bare pole cost and the annual carrying charge components; those five components.

Q And these include costs of maintenance, administration, depreciation, taxes and rate of return, right?

A That's correct.
Q And the maintenance component includes costs of maintaining poles including inspections of poles and conductors?

A It includes all the costs in account 593. And if those are booked correctly that would include those costs. Yes.

Q And Charter would pay a portion of each of these costs in each of the formulas including the FCC formula, right?

A The maintenance component is a component of the annual carrying charge rate in every formula that I've discussed.

Q So would you agree that the fundamental
differences between the FCC method and TVA method
is that TVA allocates all of the cost of the safety space entirely to any communications attachers on a per capita basis, and it allocates the cost of the unusable or the common space to all pole users including the owner on an equal per capita basis?

A Yes.
Q And the theory of TVA sharing of the cost of the safety space only among the communications companies is that the safety space would not be necessary except for the communications companies; is that right?

A I agree with that. It would not be necessary except for the communications companies.

Q Well, that's the theory that TVA uses; is that right?

A An electric company doesn't need that space. Why would they provide it but for a communications attachment?

Q That is the theory that is used by TVA in allocating all of those costs to the communications companies; isn't that true?

A That is their theory. Yes, sir.
Q Okay.
NORTH CAROLINA UTILITIES COMMISSION

A And it's well set out in their record.
Now the TVA method does not recognize that electric companies can and actually do use the safety space; isn't that true?

A I think I addressed this in my direct testimony. Yes, they can. It is not Blue Ridge's policy to put lights in the safety space as $I$ said when $I$ was working with the models and demonstrating those. I also on Monday saw a charter riser from a power supply that went through the communications worker safety space to a weather head right below a street light in the supply space. So, in fact, I guess that means Charter is using that space as well.

Q Mr. Arnett, my question had to do with the theory of the TVA method.

A I'm sorry.
Q And the TVA method does not recognize that electric companies can and actually do use the safety space; isn't that true?

A I believe TVA understood that its 160 plus electric suppliers, the local power companies could use that space when they made that decision. They are not uninformed people.

Q There isn't anything in the TVA resolution or staff report that mentions this use of the safety space by the electric companies; isn't that true?

A That doesn't mean they didn't consider it.
Q Isn't that trie?
A Yes, sir, that's true.
Q The TVA method doesn't recognize that electric companies can reclaim the safety space any time necessary to place their facilities in the space on the pole; isn't that true?

A Would you please repeat that, Mr. Gillespie.
Q Yeah. Would you agree that the TVA method does not recognize that electric companies can reclaim the safety space any time necessary to place their facilities in that space on the pole?

A I don't think that TVA looked at the terms in these contracts. I don't see any record in the TVA documentation that they considered the rental rate in light of various terms that are in these contracts.

Q Would you agree that under the contract, the current contract between Blue Ridge and Charter, that Blue Ridge has never prevented by a Charter attachment from using any space on the pole,
including the safety space, if Blue Ridge needs it?

A I believe that Blue Ridge has the recovery of space provisions in its 2008 contract. And I also heard earlier that if Blue Ridge violates that safety space then it pays for the pole replacement. Is that not what I heard earlier? I believe it is.

Q Now, under the terms of that contract, if Blue Ridge needs to use space that is currently, currently forms the safety space, it can move down into that space, right?

MS. HARDEN: Objection. Mr. Arnett is a witness explaining rate methodology. There is a separate expert on terms and conditions. He is not rendering opinion --

CHAIRMAN. FINLEY: No, no, no, I think he's trying to get to the logic behind the TVA formula. Overruled.
A Would you restate the question, please, sir?
MR. GILLESPIE: Mr. Chairman, can we read it back?

CHAIRMAN FINLEY: How about repeating it, Mr. Gillespie. I think you can remember it.

MR. GILLESPIE: Sure. BY MR. GILLESPIE:

Well, isn't it true, Mr. Arnett, that Blue Ridge -- if Blue Ridge needs space that is currently contained as safety space it has the contractual right to move down into that space, which would then push the safety space further down or potentially eliminate it entirely from the pole?

A You'd have to give me an example. If you're telling me that the safety space starts at the neutral, because Charter has an attachment at 42 inches, that's not my understanding of Blue Ridge's policy on the supply space. So where there's an infringement on Blue Ridge's space, that doesn't automatically start the communications worker safety zone as I understand it. I think the recovery of space provisions in the contract are to take care of places where Blue Ridge allows a communications attacher like Charter to move into what is reserved or planned for its future growth. And then when that opportunity arises they ask Charter or some other communications attacher to rearrange its stuff.

The fact that Charter is 40 inches below a neutral doesn't begin the safety space. Not under what Blue Ridge's -- I've heard Blue Ridge describe here today.

Q All right. Well, I'll save my questions about the supply space for another witness. But let's -- for the purpose of this question let's assume that the safety space starts at 8.5 feet from the pole top. Under this agreement, if Blue Ridge needs space that is 9.5 feet from the pole top, it can reclaim that space and that would then move the safety space down or potentially eliminate it from the pole altogether, correct? I believe that's correct. I have not been involved in administration of this agreement, and actually haven't read it in all that much detail, so I can't answer that as an authority. But from what I've heard here today I believe they could reclaim space as long as they gave notice in advance.

Q Now, ultimately it's Charter that is responsible for the capital cost of the safety space if necessary based on Blue Ridge's needs for pole space; isn't that true?

A You're saying Charter is responsible for the capital cost of creating new safety space? Yes.

A That's right. Under the recovery of space provisions of the contract, as I understand it, Charter would be required to either rearrange, remove, or pay for a new pole.
Q So, if there wasn't enough safety space on the pole as it currently exists, after Blue Ridge has moved its facilities and Charter would have to pay to install a larger pole to include more safety space, correct?
A That's my understanding. Yes, sir.
Q Now, on page 11 of your prefiled testimony you say that TVA assumes that third-party attachers derive equal benefit from the support space. Do you recall that?

A Yes, sir, I do. Page 11?
Q Yes. Now, isn't it true that TVA doesn't give any explanation for its equal sharing of the common space other than its view that it creates a higher rate and then that is, thereby in its view, avoids a subsidy?
A I believe it's a recognition that everybody
benefits from that common space. That's my understanding of what TVA has said.

Q And you find -- so you have an exhibit that contains the TVA methodology and the TVA staff report and the TVA resolution, right?

A I do.
Q That's Exhibit Number 3 to your direct testimony?
A Right.
Q Does that testimony -- excuse me, does that exhibit contain any reference to equal benefit from the support space?

A It's set out in the formula as the way the formula is done.

Q So what were you're telling me is that the TVA allocates that common cost equally among the parties; is that right?

A For the common space?
Q Yes.
A The support space?
Q Uh-huh.
A Yes, sir.
Q But it doesn't say it's because the parties benefit equally does it?
A That's obviously what they intended.

Q Well, does it say so anywhere in this document?
A I'd have to review it again in its entirety. I'll be glad to do that.

Q Do you recall anywhere where it says it? I mean, we'll all be able to check it later.

A I think intuitively, if they allocated the space to a party that's attaching to the pole, that there was an expectation by TVA that that space was of some benefit to them.

Q They don't say it though, do they?
A I could dive in here and understand it a little better, but I don't know without doing a complete review of the document.

Q Well, you're relying on this resolution and the staff report as setting forth the basis of a rate methodology that you're proposing to this Commission, are you not?

A Yes, sir, I am.
Q So turn to the second page of Exhibit Number 3.
Do you see the third paragraph where it says,
talks about TVA is the exclusive retail rate
regulator; do you see that paragraph?
A I do; yes, sir.
Q And it says that TVA seeks to ensure that
electric systems are operated for the benefit of electric consumers and that rates are kept as low as feasible, right?

A It does; yes, sir.
Q And you quote that in your direct testimony, don't you?

A I do; yes, sir.
Q In fact, it is you not TVA that justify equal sharing of the cost of the common space on the ground that, in your view, the parties get equal benefit from the common space; isn't that true?

A I do that -- I'd have to check to see how TVA addresses that, but $I$ do that based on 51 years of experience in the utility business.

Q And so it's your determination that the parties get equal benefit from the common space, right?

A TVA has allocated an equal percentage to everybody that uses the pole. If their goal was something other than to fairly share the cost associated with the pole, they could have done it some other way. But the only rationale for an equal sharing among all attachers to the pole is just for the purpose of sharing that cost among the parties.

Q So the only basis for sharing pole costs that way is equal benefit achieved from or received from that space. Isn't that what you're saying?

A That's correct.
All right. Now, you recognize that Charter occupies space on the pole for only so long as Blue Ridge doesn't need it, right? We've talked about that.

A Charter occupies space on the pole as long as it needs it consistent with the terms of the contract.

Q Yes and the contract says that, if the space that Charter is occupying is needed by Blue Ridge, Blue Ridge can take it back, right?

Blue Ridge will give Charter the option of either allowing Blue Ridge to occupy that space either through Charter rearranging or through Charter paying for an additional pole. That's correct. I will tell you that these recovery of space provisions in these contracts are not new things. I'm sure that there are TVA contracts that are out there that have those kinds of provisions in them and TVA took that -- the regulatory staff took that into account whenever they developed
the formula.
Q Are you responding to a particular question of mine, or what question are you responding to?

A Your question was --
CHAIRMAN FINLEY: Hold on. Let's ask the next question. We're sort of just debating here. Let's ask your question, Mr. Gillespie.

A Yes, sir.
BY MR. GILLESPIE:
Q Would you agree that poles by definition, Blue Ridge's poles, already exist for Blue Ridge's purposes before Charter can attach?

A Yes. I think Charter looks for existing Blue Ridge poles to attach to.

Q And, if there's not enough clearance for Charter to attach initially, Charter either may -- could decide not to attach or it could pay for a new pole, right?

A Initially that's correct. Yes, sir. Or Blue Ridge could allow it to attach in space that is part of the planned supply space with the understanding that Charter would pay for a pole replacement later.

Q Okay. So you're not aware of any other agency
using the TVA rate method; is that right?
A No, sir, I'm not.
Q And you're not aware of any judicial test of the TVA rate method; is that right?

A None to my knowledge.
Q And the TVA rate, as far as you know, is applied by TVA only to its wholesale power customers; is that right?

A I think it's supplied to all the local LPCs, the local power companies.

Q Yeah, the LPCs. And the LPCs are TVA's wholesale power customers, right?

A Yes, sir.
Q And they acquire their power from TVA and then they distribute it to individuals, right?

A Yes, sir. That's correct.
Q And there are four, you mentioned this, there are four TVA customers in North Carolina whose pole rates were regulated by TVA. Do you recall that?

A Yes, sir, I do.
Q Now, you don't know what the pole rates for these entities will be under the TVA method; is that true?

A I do not know.

Q And TVA does not regulate any terms or conditions of pole attachment agreements; isn't that true?
A That's correct. They have not issued any rules on terms and conditions to my knowledge.

Q And we don't have any guidance from TVA about whether it contemplates any "but for cost" in addition to the rate; isn't that true?

A I don't know what their plans are as far as terms and conditions going forward. No, I don't.

Q And that includes whether it contemplates that the attacher will pay for "but for cost" in addition to the TVA rate?

A It's not stated in the documentation on the formula.

Q TVA uses a number of presumptions or adopts a number of presumptions; is that right?
A It does.
Q And those presumptions are that an average pole is 37.5 feet tall, right?

A That's one. Yes, sir.
Q And that's also an FCC presumption, is it not?
A It is.
Q And TVA presumes that a pole has 13.5 feet of usable space?

A It does.
Q And the FCC has that same presumption, right?
A It does.
Q And TVA presumes that 24 feet are unusable common space, correct?

A It does.
Q And the FCC has the same presumption, right?
A It does; yes, sir.
Q And the FC -- TVA and the FCC both presume that a communications attachment takes up one foot of pole space, right?
A That's correct. Yes, sir.
Q And both TVA and the FCC presume that 15 percent of an electric utility's pole cost in account 364 consist of appurtenances such as cross arms that are not useful to attachment, right?

A That's correct, and 5 percent for an ILEC.
Q We're talking here about an electric utility, correct?

A Yes, sir.
Q And both TVA and FCC presume that an average pole has three attaching entities including the pole owner, right?

A That's correct.

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Q And TVA uses a rate of return of 8.5 percent and the FCC default is currently 11 percent or 10 point --

A It's 10.75 currently. Yes, sir.
Q Now, applying all these presumptions, TVA
allocates 28.44 percent of the average net pole to third-party communications attachers, right?

A It does.
Q And that's shown on page 17 of your testimony; is that right?

A Right.
Q Now, with your calculations you actually allocate over 41 percent of the cost of the pole to Charter; isn't that true?

A 41.16 I believe in 2016 .
Q And that's based on your rebuttal of each of those TVA presumptions except for the rate of return, right?

A The rate of return is specified. It's not a rebuttable presumption as $I$ understand it.

Q You rebut all the other presumptions, right, or all the presumptions?

A I do. We had actual data.
Q Now, where would the Commission read in your
NORTH CAROLINA UTILITIES COMMISSION
direct testimony to find a reference to this actual percentage of more than 41 percent of pole cost that you apply to Charter in your direct | testimony?

A It's actually in the exhibits. If you'll look at the rental rate calculations, it's set out in Exhibit Number 2, 2.1, 2.2, and 2.3. And I believe $I$ discussed rebutting each of those presumptions in the direct testimony so the results of those rebuttals are shown. For 2014, the effect is a 41.25 percent cost allocation to Charter. For 2015, it's 41.21 .

Q My question was where do you find them. You find them on line 6 of the spreadsheet contained in Exhibit 2, right?

A Yes, that's correct.
Q So you're not allocating 28.44 percent of the pole cost to Charter, you're actually allocating over 41 percent, right?

A I'm allocating what is calculated using Blue Ridge's actual data.

Q And that's 41.25 percent the way you calculate it, right? .

A For 2014, yes, sir, that's correct.

Q And that's about 44 percent rounding to 45 percent higher than 28.44 percent; isn't that right?
A It's significantly higher. That's correct.
Q Now, Charter has been paying Blue Ridge a rate in the range of $\$ 26.00$, actually, $\$ 26.64$; is that right?
A I'm not sure. If you say that's what it is, I would agree with that.
Q Now, by rebutting all the presumptions you have derived a rate that just about gets to that. The rate that you've derived by rebutting these presumptions is $\$ 26.56$ for 2017 ; is that right?

A It is; yes, sir.
Q Now, the TVA rate that you've calculated wouldn't have been anywheres near the twenty-six dollar range that $B l u e$ Ridge has been charging Charter if you had not rebutted the presumptions; isn't that true?

A Right. And I wouldn't have been doing my job correctly if I didn't use the rebuttable presumptions.

Q So in rebutting the number of attaching entities you looked only to poles that had foreign
attachments, right?
A That's correct.
So to determine how many entities were on a pole you looked at the poles that had an attachment by some party other than Blue Ridge only, right?

A That's correct.
Q Now, that's the way the FCC rebuts that or has stated that that presumption may be rebutted; is that right?

A That's my understanding; yes, sir.
Q And you based your number on the number of attaching parties on the 2015-2016 audit; is that right?
A The results of that audit; yes, sir.
Q Now, in rebutting the appurtenance percentage -well, both the FCC and TVA adopted the presumption that 15 percent of the electric company's pole account consists of appurtenances that are not used by the third-party attacher, right?

A That's right.
Q And both the FCC and TVA subtract that 15 percent presumption from pole investment, right?

A In the absence of any other data, yes.

1 Q Now, you follow an ECC order as to how to rebut that presumption; is that not true?

A That, in 1987, established what everyone -fairly well except as the historical bare pole cost components. And it includes the structure itself and anchors and guys.

Q And you attached the FCC decision to this effect in Exhibit 8 to your testimony, right?

A I did.
Q And the rebuttals of this presumption,
15 percent, reduced the appurtenance percentage to less than 15 percent for Blue Ridge, right?

A I believe the number was 87 percent instead of 85; that's right.

Q And that means that your appurtenance percentage is about 13 percent rather than 15 percent, right?
A There's more of the total cost in the account in the pole than the presumption; that's correct.
Q And that results in raising the rate, does it not?

A It does; it would raise the rate.
Q Now, you chose not to rebut the 15 percent appurtenance percentage for any of the co-ops in
the June proceeding; isn't that true?
I believe that's right.
And didn't you have the information to do so for at least Carteret-Craven and Union?

A I don't remember for sure. I didn't do those calculations for those co-ops, someone on my staff did.

Q Mr. Arnett, I'm going to give you two documents. One related to Carteret-Craven and one that relates to Union that consists of continuing property record information. Are you familiar with those documents?

MS. HARDEN: Were these documents exhibits before this proceeding?

MR. GILLESPIE: I do not --
MS. HARDEN: They're marked confidential.
MR. GILLESPIE: -- believe that they were -they were not exhibits in the June proceeding. They were provided to us in discovery in that proceeding.

MS. HARDEN: Then I object to discovery as opposed to testimony or exhibits from this witness from the prior proceeding being introduced.

MR. MILLEN: Particularly if its
confidential. With respect to other co-ops that
aren't present.
MS. HARDEN: I assumed Mr. Gillespie was talking about testimony and exhibits. I didn't know he was talking about produced documents.

CHAIRMAN FINLEY: Well, if Mr: Arnett is familiar with the documents, I don't care what role they played in the prior case. I am a little bit concerned about the confidentiality of it. Is it confidential or not? Mr. Gillespie, do you know?

MS. HARDEN: It's stamped confidential on its face.

CHAIRMAN FINLEY: Well, I can't see it so -MS. HARDEN: I couldn't either until I saw it, sir.

MR. GILLESPIE: They appear to have a confidential stamp on the bottom, Mr. Chairman.

CHAIRMAN FINLEY: Yeah, okay, well, you might be violating some agreement that you've got then.

MR. GILLESPIE: Well, this witness was a witness in that proceeding and he had access to these documents through that proceeding. That's the whole point of the line of questions.

CHAIRMAN FINLEY: Well, yeah, but I
understand that piece, but I'm worried about the confidentiality of it if it's something that shouldn't be on the public record then, without the consent of who produced the document.

MR. GILLESPIE: I'm not putting any of that information on the public record, Mr. Chairman.

MR. MILLEN: It's particularly concerning to me, as the one who represented Carteret Craven in that previous proceeding, and that's produced as confidential not to this entity, Charter Properties, but to Time Warner which is a different entity, and it shouldn't be for crossing as confidential information between two separate entities.

MR. GILLESPIE: I'm just refreshing the witness's recollection with regard to the manner in which he made a determination in --

CHAIRMAN FINLEY: Well, ask him the questions without referencing these documents.

MR. GILLESPIE: All right.
BY MR. GILLESPIE:
Q Isn't it true, Mr. Arnett, you had the information to rebut the appurtenance percentage for those two entities in the June proceedings? A I notice that these two documents are dated for
two different years. One is for December of 2016 and one is for December of 2015.

MS. HARDEN: Mr. Arnett, I believe the Commission ruled that you weren't to use those documents. So could you return them to Charter's counsel or Time Warner's counsel?

A Thank you. Your question was if the data was available why didn't we use it?

Q Well, my first question was whether the data was available.

A Well, I -- I didn't do any calculations to see -I actually didn't finish looking at those sheets to see if the data was available on them.

So I --
Q I'll move on. TVA and the FCC presumed pole height to be an average of 37.5 feet, correct?

A They do.
Q And you rebutted that presumption by running the calculation that took all the poles in the distribution pole investment account, that's Account 364, and multiplied by their lengths and divided by the total number of poles shown in that account for each year; is that right?

A For Account 364; yes, sir.

Q And so you determine that way the average height of all distribution poles on the co-ops' books, right?

A I did. 36.87 in 2016.
And you counted poles to which no third party is attached, correct?

A One can't tell from the CPRs which poles have attachments and which ones don't. And the 37.5 foot rebuttable presumption assumes all poles, as I understand it, on the system.

Q My question was simply whether you counted all poles to which, excuse me, whether you counted poles to which no third party is attached.

A The answer is $I$ used the entire system average because I couldn't tell from the CPRs which ones had attachments and which ones didn't.

Q So unlike your rebuttal of the number of entities presumption, here you looked at all of Blue Ridge's poles, not just those with a foreign attachment, correct?
A That's the only universal poles there was.
Q Now, you determined that for 2017 the average distribution pole on the co-ops' books is 36.87 feet long; is that right?

NORTH CAROLINA UTILITIES COMMISSION

A That's correct. 36.83 in 2014; 36.85 in 2015; and then the 36.87 in 2016, based on the CPRs.

Q And those averages are obviously a little shorter than the TVA presumption of 37.5 feet, correct?

A That's correct.
And you don't know the average height of poles to which Charter is actually attached; is that right?

A That's correct. We tried to investigate that and that data is not available.

Q And you don't know what's the average height of poles to which a third party is attached, right?
A I don't know exactly what that is and that would have been interesting to know. Because when you get above a 35 -foot pole on Blue Ridge's system, the cost of the poles go up almost 100 percent.

Q Well, you understand my question, my question had to do with whether you know what the height of the poles is to which a third party is attached?

A The answer to that is no.
Q Thank you. Are you familiar with any guidance from the FCC about how to rebut the presumption of an average pole being 37.5 feet long?

A My understanding is you would use the records of
the pole owner to do that and that's exactly what we did.

Q Are you familiar with any FCC guidance on that issue?

A I don't -- I am not familiar with any guidance being issued. It assumes you would use your records to make that rebut -- that -- to change the rebuttable presumption.

Has TVA issued any guidance as to how to rebut the presumption that an average pole is 37.5 feet long?

A It says where the LPC has records. And it hasn't -- TVA hasn't said what records to use in rebutting this presumption, correct?

A There's -- no, sir, it hasn't, but there's only one record as to pole heights.

Q Are you aware of TVA ever having authorized the rebuttal of that presumption?

A I believe the documentation says where the LPC has the data it can make that rebuttal.

Q Doesn't the documentation say that any presumption to be rebutted of a TVA co-op a TVA customer is to get the specific incentive TVA.

A I don't remember it that way.
NORTH CAROLINA UTILITIES COMMISSION

Q Doesn't it say it has to be justified to TVA? Look at Exhibit 3, page 3.

A It says in the second paragraph of that same page, Staff considers a uniform rate of -- rate of interest return on investment important to promoting consistency across the valley but agrees that it may be appropriate to allow LPCs to use actual system data or average pole height and discount factor.

Q And what does it -- what does it say -- what does the next sentence say? Would you read that, please?
A Accordingly where such data is available and the LPC provides sufficient justification to TVA supporting the use of actual data inputs for both pole height and discount factor assumptions, the LPC may be permitted to use actual data.
Q And the TVA doesn't indicate here what the actual data would consist of, does it?

A No, sir, it doesn't.
Q The result of rebutting the presumption of a 37.5 foot pole and substituting a shorter pole is to increase the rate; isn't that true?
A It does increase the rate. That is the effect.

Q TVA adopts the FCC presumption that the minimum attachment height is 18 feet, right?

A Yes, sir, it does.
Q And you've rebutted that presumption, right?
A I did.
Q And you did so by calculating the average minimum attachment height of -- for 2017, for example, or I guess for 2016, is 21 feet and 26 inches; is that right?

A 21.26 feet; yes, sir.
Q And as a result of that you calculate that the amount of common or unusable space is 20.26 -27.26 feet, right?

A I'd have to look at the calculations but that sounds right; yes, sir.
Q Well, that's 6 feet buried and 21.26 feet to reach minimum grade, right?
A That's correct.
Q And that's up from the 24 feet that is presumed by TVA, right?

A Yes, sir. That's correct.
Q And to determine the average minimum attachment height you calculated average span length, right?
A I did.

Q And you didn't measure actual average span lengths, did you?

A No, sir. I took the records from the CPRs as to the number of poles. And on Form 7 there's a statistics section on page, I believe 1 , maybe page 2 that says the miles of overhead conductor. You simply divide the miles of overhead conductor by the number of poles to get the poles -- I'm sorry, poles by miles to get the number of poles per mile and then you use 5,280 feet to determine the span length.

Q Now, is that an estimate?
A That's an actual average span length.
Q That -- you have also determined that there are 44, excuse me, 442 transmission poles that contain Charter's lines, right?

A That was not my determination. That was determined by the attachment inventory.

Q Right. And transmission poles are not contained in Account 364, right?

A That's correct.
Q And other third parties are attached to other transmission poles; isn't that true?

A I would assume that's correct. I haven't
actually looked at the records.
So you really don't know how many transmission poles are attached to by third parties.

A The attachment inventory had the data specific as to whether or not the pole being inventoried was transmission or distribution. That was one of the choices in the Excel spreadsheet that came from the attachment inventory. Also in the results of that attachment inventory was a listing of the different of combinations of possible parties that could be attached to those poles. So from the inventory I believe we could determine how many transmission poles had other foreign attachments on it.

Q And you have not made that determination; is that right?

A That's correct. I have not
Q And some of the distribution conductors that you have counted from the RUS form, those are attached to just -- to transmission poles instead distribution poles, correct?

A I'm sorry, I lost you. Could you repeat that, please, sir?

Q Yes. So you took the miles of conductors,
distribution conductors, and you divided them by the number of distribution poles, right? And you did not include in that any of the transmission poles, correct?

A That's correct; did not.
Q Even though some of those conductors are actually attached to transmission poles rather than distribution poles.

A That's correct; didn't have that information.
Q And to get an accurate number you really would have to divide not just by the distribution poles but by the number of transmission poles that are attached to by those conductors; isn't that true?

A That would be an input also; yes, sir.
Q It would be an input but you wouldn't have an accurate number unless you divided by those poles; isn't that right? It's a matter of math.

A That's correct.
Q And you assumed that the minimum attachment and I -- for all attachments mid-span is 15.5 feet, right?

A That's a valid assumption based on my experience. The NESC requires 15.5 feet under the largest final sag, which is ice loading, on a
distribution. system with cable or communications attached.

Q There are also situations in the NESC that allowed for lower attachment heights, right?

A Absolutely. And there are situations in the NESC that require much higher attachment heights over rails, over navigable waters. Over navigable waters there are requirements for 38 feet in some locations.

Q And where a pole line is subject to pedestrian traffic only, the NESC allows a minimum attachment height mid-span of 9.5 feet, correct?

A That's correct.
Q And you made no study to determine for Blue Ridge the number situations where those mid-spans are required to be 15.5 feet over the ground, or 9.5 feet, or some higher amount as you said, right?

A I did not do any study. I did do a ride and looked at field conditions. I didn't find a single place while $I$ was riding and looking. I -- my expectation is while there probably are a few locations where 9.5 feet would be appropriate, that's probably less than 1 percent of the system. And there also are other
locations where the higher attachment raise, the higher ground clearances are required.

Q What percentage of the system did you ride out in this ride out?

A It was only one days' ride so probably no more than 15 or 18 miles of the system.

Q How many miles is it total?
A I don't remember. It's several thousand I'm sure.

Q The result of the lowering the average pole height and increasing the minimum attachment height is to increase the amount of unusable space and to decrease the amount of usable space; is that right?

A It would have that effect, yes.
Q And the result of that would be to increase the rate, correct?

A As less space is available the rate would go up, yes.

Q Do you know what guidance the FCC has given regarding the information that you need to rebut the presumption that there's 13.5 feet of usable space on the pole?

A No, sir, but $I$ know how to calculate that.

Q My question was whether you've gotten any guidance from the FCC according to what are discussed what you need to look to, what information you need in order to rebut that presumption.

A I did those kinds of calculations whenever I was in the engineering department at Southern Bell and BellSouth for their communications cables. We routinely calculated the point of attachment and those points of attachment were almost never on an electric co-op pole 18 feet.

Q Did you understand my question? My question was whether you know what the FCC requires in order to --

CHAIRMAN FINLEY: I think in his answer before last he said no.

A That's correct. I do not know.
BY MR. GILLESPIE:
Q I'm going to hand you a copy of parts of -subpart $J$ of 47 , Title 47 of the FCC rules?

MS. HARDEN: I object. These are not rules that are applicable to the pole attachment methodology being determined by this Commission. He's questioning him on the FCC pole attachment --

CHAIRMAN FINLEY: Well, let's --
MS. HARDEN: -- not this Commission.
CHAIRMAN FINLEY: Let's let him see where -I don't know where he's headed with this. Overruled for the moment at least.

BY MR. GILLESPIE:
Q Take a look at Rule 1.1404 of the complaint and look at section G1. Maybe the easiest way is on the page that has 1.1404 for the reverse of that page and look at subsection XI. Do you see that? A XI says the average amount of usable space per pole. For those poles used for pole attachments, 13.5 feet may be in lieu of actual measurements, but may be rebutted.

Q Do you see the reference to the amount of usable space for use on poles used for pole attachments?

A Is that the XI that you were be talking about?
Q Yes.
A Yes, sir.
Q And you see section XII, what does that say?
A It says the average amount of unusable space, what we call the support space, per pole for these poles used for pole attachments, a 24-foot presumption may be used in lieu of actual
measurements, but the presumption may be rebutted.

Q And this says also, it says you look only to poles that are used for pole attachments, correct?

A I haven't read that in here but $I$ know that is what they have said.

Q Now, TVA hasn't given any of its own guidance to how to rebut the presumption of the minimum attachment height; is that right?

A No, sir, not to my knowledge.
Q The TVA presumes that an attachment uses one foot of space; is that right?

A It does; yes, sir.
Q And the FCC also presumes than the attachment uses one foot of space, right?

A It does. And the National Electric Safety Code says that there's a required 12 inches of space between communications attachments.

Q Do you know whether the FCC presumption of one foot of space has ever been rebutted?

A I don't know that. But $I$ know that the TVA guidelines talk about one foot or two feet of space for an attacher, and $I$ know that Charter is
certainly not two feet but also they're certainly not one foot. The records from the inventory document that Charter is a hybrid of that. Well, you presume that each attachment Charter has occupies one foot of space. You accept that presumption, do you not?

A That's the results of the inventory.
Q No. You -- the result of the inventory is that an attachment occupies one foot of space?

A The results of the inventory told me how many attachments were out there.

Q My question had to do with the presumption regarding each individual attachment. You accept the presumption that each attachment occupies one foot of space, correct?

A $\quad$ I do.
Q Now, the TVA talks about allocation of either one foot or two feet of space depending on the space occupied by the communications attaching party; is that right?

A It does; yes, sir.
Q And instead of using one foot or two feet, you have adopted what you call the hybrid, right?

A I did two things, actually three things. I used
the TVA formula and developed a rental rate for one foot of the pole space. I used the TVA formula and substituted one foot, instead of one foot I put two feet. I calculated the rates both ways. I, on the third hand, used total number of poles with attachments. I'm sorry. Yes, poles with -- the unique number of poles with 1.11 foot of space in recognition that there were about 2700 poles Charter was attached to that had more than one attachment. I used than 1.11 space allocation and developed total billing and compared it with my summary for the number of poles with one attachment and the number of poles with two. It was within $\$ 103$. It was rounded. To do it any other way, Blue Ridge would have to keep records on how many Charter attachments on every pole. The way I did it we can come up with a single blended space allocation for the Charter attachment based on the number of attachments they have on the number of poles and apply that until there's an inventory done later.

Mathematically, I found the 1.11, and the one attachment, and the one -- the calculation with two attachments to be the same, Mr. Gillespie.

Q Well, Mr. Arnett, TVA in the staff report addressed this issue of space occupied per attacher, did it not, in Attachment $B$ to your Exhibit Number 3 to your direct testimony?

A I believe we covered this in my deposition and we read this at that point in time.

Q Okay.
A And we read that it assumes either one foot or two feet and it does --

Q Well, look at -- these pages are not numbered in your exhibit for some reason.

A No, they're not.
Q But Attachment B, at the top a page it says B: Summary of Feedback. Or let's look at -- it's Roman Numeral III: Comments; then it has B: Summary of feedback; and then it has 1: Methodology; and then it has a series of bullet in paragraphs. Do you see those?

A I do; yes, sir. I think I'm in the right place.
Q Well, look at the one that says space occupied per attacher? Do you see that?

A I do. It says --
Q All right. And this explains staff's thinking with regard to this item; does it not?

A It does. And what it says is some local power companies noted that the amount of space used by an attacher can vary depending on the type of attachment and question whether a different assumption should be used --

Yes, and they were --
-- to address this. Regulatory staff modified the formula to calculate a rate for either one foot of space or two feet of space. This is indicated in the final recommendation. What I said earlier was I did the same thing. I calculated a rate with one foot of space and I calculated a rate with two feet of space, and I can tell you that mathematically that the results by using 1.11 for the number of poles of each type that Charter is attached to is exactly the same.

Q Well, Mr. Arnett, in that extension of that answer you covered over the key point, which is that the TVA noted that some of its customers had said that the space used by an attacher can vary depending on the type of attachment, right?

A Yes, sir.
And that's what they were reacting to, correct?

A I'm not sure about that. The type of attachment I'm saying is either one foot or two feet. I don't -- I'm not familiar with attachments that are just two feet of space. I mean, two attachments on a pole would require two feet of space. I think we're saying the same thing here. Do you know what the auditors counted as an attachment in the 2015-2016 audit?

A No, sir, I don't. I understand it was done consistent with previous audits and that Charter agreed to the numbers.

Q And you're rebutting the presumption of one foot to make it 1.11 feet --

A No, sir, I'm not.
Q -- relied on --
A I'm sorry. I interrupted.
Q -- relied on the audit results concerning the number of attachments to the poles; is that right?

A I found that the attachment inventory documented the fact that there were places where Charter was using more than one foot of space. I felt it inappropriate simply because there are places that Charter would use one -- use 2 -feet of space
to assume that for every place. What I did was a calculation that acknowledged -- admittedly, I made an assumption where Charter had multiple attachments, more than the numbers of poles, it was just simply one per pole. There may have been places where Charter had three or four attachments. But the simplest way to do the calculation was to do a one-foot calculation and two-foot calculation. Those numbers were easy to determine.

Q You had the information, similar information from an audit conducted by Union Power in the June proceeding; isn't that right?

A Union Power had done an attachment inventory; yes, sir.

Q And you've made no effort to rebut the presumption of 1.1 feet, excuse me, of one foot in that proceeding, right?

A And I don't know whether -- I don't know the results of that inventory and how many -- I don't know what the delta was there. I do not remember that.

CHAIRMAN FINLEY: All right, ladies and gentlemen, we've reached the bewitching hour today so

NORTH CAROLINA UTILITIES COMMISSION

1
we're going call a halt to this hearing for today. An issue has been raised as to whether we want to start tomorrow at 9:00 or 9:30. What is the -- let's go off the record a minute.
(OFF THE RECORD DISCUSSION)
CHAIRMAN FINLEY: 9:00 and let's finish tomorrow.
(Recessed at 5:00 p.m., to reconvene at 9:00 a.m.)

CERTIFICATE
I, KIM T. MITCHELI, 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.

$F \mid L E D$
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N.C. Utilities's Office
N.C. Utilities Commission

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[^0]:    ${ }^{1}$ S. Rep. No. 95-580, at 18 (1977), reprinted in 1978 U.S.C.C.A.N. 109, 126. (See WA Exhibit No. 23).

[^1]:    ${ }^{2} I d$.
    ${ }^{3} I d$.

[^2]:    ${ }^{4}$ S. Rep. No. 95-580, at 13 (1977), reprinted in 1978 U.S.C.C.A.N. 109, 121.
    ${ }^{5}$ The Pole Attachment Act was included as part of the Communications Act Amendments of 1978, P.L. No. 95-234, and was codified at 47 U.S.C. § 224.

[^3]:    ${ }^{6}$ H.R. Rep. No. 104-204, at 91 (1995).
    ${ }^{7}$ Charter's year end 2016 Form 10-K

