

**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**Verizon Pennsylvania LLC and Verizon North LLC**

**v.**

**Metropolitan Edison Company, Pennsylvania Electric Company, and  
Pennsylvania Power Company  
Docket No. C-2020-3019347**

**Rejoinder Testimony  
of  
Randal J. Coleman, P.E.**

**List of Topics Addressed**

**As-Found Construction of Verizon's Attachments to FirstEnergy's Poles**

**Costs to Remove FirstEnergy's Electric Facilities from Verizon's Poles**

**Spacing Assumption for Communications Attachers**

**NON-PROPRIETARY VERSION**

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1 **Q. Are you sponsoring any exhibits with your rejoinder testimony?**

2 A. Yes. Attached to my testimony is CONFIDENTIAL FirstEnergy Exhibit RC-4.

3

4 **Q. Before responding more specifically to the issues raised in Verizon’s surrebuttal**  
5 **testimony, do you have any general comments?**

6 A. Yes. The conclusions set forth in my rebuttal testimony remain unchanged. My  
7 rejoinder testimony may not respond to every individual issue raised in Verizon’s  
8 surrebuttal testimony regarding my rebuttal testimony. Instead, my rejoinder testimony is  
9 focused on responding to particular issues I identified in Verizon’s surrebuttal testimony.  
10 If there are any claims by Verizon that I do not address in this rejoinder testimony, it does  
11 not mean that I agree with them.

12

13 **II. AS-FOUND CONSTRUCTION OF VERIZON’S ATTACHMENTS TO**  
14 **FIRSTENERGY’S POLES**

15 **Q. In Mr. Mills’s surrebuttal testimony, he contends that your rebuttal testimony**  
16 **about Verizon’s compliance with FirstEnergy’s construction standards is**  
17 **“misleading and inaccurate” because you judged the attachments based on**  
18 **“FirstEnergy’s construction standards in effect as of January 2020,” some of which**  
19 **were “revised as recently as 2018 or 2019.” (Verizon Statement No. 1.1, p. 66.)**  
20 **According to Mr. Mills, the attachments should be grandfathered to any changes to**  
21 **the construction standards. (Verizon Statement No. 1.1, p. 66.) What is your**  
22 **response?**

23 A. In reality, it is Mr. Mills’s testimony that is misleading and inaccurate. Although existing  
24 installations may be grandfathered into changes under the National Electric Safety Code

1 (“NESC”), Mr. Mills fails to realize that there have been no substantive changes to the  
2 spacing requirements in the construction standards since the 1970’s. The 2018 and 2019  
3 revisions he mentions were mostly font, style, and grammar changes that had nothing to  
4 do with the published construction standards that Verizon failed to follow in constructing  
5 its attachments. None of the updates in the 2018 and 2019 revisions were triggered by  
6 changes in the 2017 NESC publication. Specifically, the following list provides the  
7 reasons for each revision made in 2018 and 2019 to the construction standards that was  
8 identified by Mr. Mills:

- 9 1. FE00067 – This is an index page with no design or engineering guidance.  
10 The revision notes an update to the push brace standard see CS-7-120  
11 (FE00073) where the specific change was made.  
12
- 13 2. FE00069 – This is a standard for the installation of FE equipment guys. This  
14 does not apply to joint attachers such as Verizon who should use their own  
15 construction standards. The change was caused by a shift in wire type from  
16 Benzenol to Aluminum clad steel.  
17
- 18 3. FE00073 – This is a standard for the installation of a push brace and does not  
19 apply to joint attachers such as Verizon. The update was made to comply  
20 with new style guide only. No design changes were made.  
21
- 22 4. FE00076 – This is a standard for the installation of span Guys. The change  
23 allows both transmission and subtransmission use cases for the same standard.  
24
- 25 5. FE00082 – This is a standard for the installation of conventional transformers.  
26 The word “internal” was added to current limiting fuses where current in  
27 excess of 10 kA may be encountered.  
28
- 29 6. FE00084 – This standard was updated to reflect the new style guide  
30 requirements.  
31
- 32 7. FE00086 – This standard was updated to add 30W LED streetlight  
33 installations.

1 Thus, Mr. Mills's argument that Verizon's attachments did not have to comply with the  
2 spacing requirements in FirstEnergy's published construction standards completely lacks  
3 merit.

4  
5 **III. COSTS TO REMOVE FIRSTENERGY'S ELECTRIC FACILITIES FROM**  
6 **VERIZON'S POLES**

7 **Q. Verizon's witnesses also critique your estimates of the cost for FirstEnergy to**  
8 **remove its attachments from Verizon's poles and construct duplicate facilities to**  
9 **house those attachments. (Verizon Statement No. 1.1, p. 67; Verizon Statement No.**  
10 **2.1, p. 61; Verizon Statement No. 3.1, pp. 22-23.) Mr. Mills and Dr. Calnon even**  
11 **assert that it would cost more for Verizon to remove its attachments from**  
12 **FirstEnergy's poles and construct duplicate facilities. (Verizon Statement No. 1.1, p.**  
13 **67; Verizon Statement No. 2.1, p. 61.) Would you please respond?**

14 **A.** Notably, Verizon never provides an estimate of the cost to remove its attachments from  
15 FirstEnergy's poles and construct duplicate facilities to house those attachments. Mr.  
16 Mills simply alleges that there would be "far greater expense and time required for  
17 Verizon to identify and obtain approval to use alternate infrastructure that substitutes for  
18 FirstEnergy's poles." (Verizon Statement No. 1.1, p. 67.) It appears that both he and Dr.  
19 Calnon based their claims solely on the fact that FirstEnergy owns approximately three  
20 times the number of joint use poles owned by Verizon. (*See* Verizon Statement No. 1.1,  
21 p. 67; Verizon Statement No. 2.1, p. 61.) Indeed, Dr. Calnon states that "Verizon would  
22 incur roughly three times FirstEnergy's cost because FirstEnergy owns three times the  
23 poles." (Verizon Statement No. 2.1, p. 61.)

1           However, the cost to construct communications poles is lower than the cost to  
2           construct electric utility poles. Specifically, FirstEnergy calculated an estimated cost of  
3           \$83,850 per mile to construct class 6 communications poles to house 144 fiber ADSS  
4           cable. The calculation of that estimate is set forth in CONFIDENTIAL FirstEnergy  
5           Exhibit RC-4 attached hereto. By contrast, my rebuttal testimony explained that it would  
6           cost approximately [BEGIN CONFIDENTIAL] [REDACTED] [END CONFIDENTIAL]  
7           per mile to construct duplicate pole facilities to house FirstEnergy's attachments.

8  
9   **Q. Dr. Tardiff claims that FirstEnergy's estimated costs to construct duplicate pole**  
10 **facilities, which were set forth in your rebuttal testimony, are "unsupported."**  
11 **(Verizon Statement No. 3.1, pp. 22-23.) Do you agree?**

12 **A.** No. I supplied a cost estimate for the replacement of electric infrastructure, not just a line  
13 of duplicate wood poles. The Companies simply cannot relocate existing infrastructure  
14 from one side of the road to another. Doing so would expose customers to very extended  
15 outages of days or weeks which is unacceptable. A hot transfer - where the line remains  
16 in service - is far more labor intensive and requires extensive safety protocols that would  
17 have an even higher cost. The estimate provided includes distribution wire, cross arms,  
18 insulators, connecting and supporting hardware for one mile in each of the design types  
19 outlined.

20  
21 **IV. SPACING ASSUMPTION FOR COMMUNICATIONS ATTACHERS**

22 **Q. Mr. Mills argues in his surrebuttal testimony that DRG's field audit study data**  
23 **contains "significant errors that inflate the amount of space FirstEnergy says**

1           **Verizon occupies” by assuming that “Verizon has six inches of clearance *above* its**  
2           **facility in all cases” and that “Verizon occupies six inches of space *below* its facility.”**  
3           **(Verizon Statement No. 1.1., pp. 54-57.) Was that assumption by DRG reasonable?**

4    A.    Yes. This assumption was reasonable because NESC standards require minimum  
5           clearance for vehicles, farm equipment and other activities. Also, if the road is a  
6           PENNDOT road, the required minimum clearance is 18 feet (over pavement & shoulder)  
7           per 67 Pa. Code § 459.9(c). To maintain the 18-foot minimum clearance, the attachment  
8           must account for midspan sag by raising the conductor attachment above the 18-foot  
9           minimum clearance. Indeed, no conductor remains perfectly straight when spanning  
10          from pole to pole. To overcome this and clear the minimum height requirements, the  
11          pole attachment point must account for the line sag over the span. Claiming that Verizon  
12          is only responsible for one half the space of others because they always attach at the 18-  
13          foot level would violate the laws of physics and be wrong. The six inches of pole space  
14          above and below the attachment is fair to all attachment parties including Verizon. Thus,  
15          Mr. Mills’s criticism of DRG relying on this assumption lacks support.

16  
17    **V.    CONCLUSION**

18    **Q.    Does this conclude your rejoinder testimony?**

19    A.    Yes, it does.