

ORIGINAL

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, D.C. 20554

In the Matter of )  
 )  
Amendment of Rules and )  
Policies Governing Pole )  
Attachments )

CS Docket No. 97-98

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

**REPLY COMMENTS OF THE ELECTRIC UTILITIES COALITION**

Walter Steimel, Jr.  
Richard E. Jones  
Marjorie K. Conner  
Ronnie London  
**HUNTON & WILLIAMS**  
1900 K Street, N.W.  
Suite 1200  
Washington, D.C. 20006  
(202) 955-1500

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## Executive Summary

Having considered the comments filed in this proceeding, the Electric Utilities reply herein to a number of general and specific matters. One overarching matter is that the Commission must recognize the fundamental differences between electric and telephone utilities and avoid adopting rules which purport to apply universally to two very different industries with different operations, plant investments, accounting methods and public service obligations. The Commission must also recognize the substantial differences among individual electric utilities. Even though the Commission may adopt rules and formulas of general applicability, statutory and constitutional constraints require that the Commission not force an inflexible "one-size-fits-all" formula upon all electric utilities, but rather permit each utility to rebut the underlying presumptions when the formula is applied. The Commission should also encourage electric utilities and their attachers to arrive at negotiated pole attachment rates, terms and conditions as contemplated by statute.

The Electric Utilities renew their call for the Commission adopting a separate formula for poles thirty feet and under. Failure to do so will lead to dilution of the pole cost allocation and the misapplication of other presumptions underlying the pole attachment rate formula. The result would be that the presumptive just and reasonable rental rate as applied to all poles may be facially confiscatory or confiscatory as applied. The Electric Utilities also reiterate and further explain the legal and factual bases which require that the forty-inch safety space be allocated as unusable space to the attaching entities.

These Reply Comments expound upon the proper consideration the Commission should place on sag and ground clearance requirements as they relate to the pole attachment rate formula. The Electric Utilities also stress that the pole attachment rules adopted in this proceeding should not apply to transmission facilities or be applied to wireless facilities.

Finally, the Electric Utilities urge the Commission to recognize that electric underground conduits and ducts are totally different from telecommunications underground conduits and ducts, resulting in the need for different protocols and separate rates, terms and conditions of attachment for electric conduits and ducts.

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TO: The Commission

**REPLY COMMENTS OF THE ELECTRIC UTILITY COALITION**

Carolina Power & Light Company ("CP&L"), Delmarva Power & Light Company ("Delmarva"), Atlantic City Electric Company, Entergy Services ("Entergy"), Florida Power Corporation, Pacific Gas and Electric Company ("PG&E"), Potomac Electric Power Company ("PEPCO"), Public Service Company of Colorado ("PSCo"), Southern Company, Georgia Power, Alabama Power, Gulf Power, Mississippi Power, Savannah Electric, Tampa Electric Company ("TECO"), and Virginia Power, including North Carolina Power, (each an "Electric Utility," collectively, "Electric Utilities"),<sup>1</sup> by their attorneys, hereby file their Reply Comments to the Comments filed in response to the March 14, 1997, Notice of Proposed Rule Making ("NPRM") issued by the Federal Communications Commission ("FCC" or "Commission") in CS Docket No. 97-98.<sup>2</sup>

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1. A full description of each of the Electric Utilities is contained in Appendix A of the Joint Comments of the Electric Utilities Coalition filed with the FCC on June 17, 1997.

2. Although the NPRM specifies an initial comment date of May 12, 1997, and the Commission's *Amendment of Rules and Policies Governing Pole Attachments*, CS Docket No. 97-98, Order, DA 97-894, released April 29, 1997, specifies a reply date of July 28, 1997, this Reply is timely filed pursuant to Amendment of Rules and Policies Governing Pole Attachments, CS Docket No. 97-98, Order, DA 97-1583, released July 25, 1997 (extending reply date to August 11, 1997).

## I. INTRODUCTION

The Electric Utilities have considered the comments of the parties to this proceeding, and reply to a number of general and specific matters. General matters include the necessity for the Commission to recognize the fundamental differences between electric and telephone utilities, and to avoid attempting to draft rules which would apply uniformly to two very different industries with different operations, plant investments, methods of accounting and public service obligations. The Commission also should recognize that there are substantial differences among individual electric utilities and that, while adoption of rules and formulas of general applicability may be possible, any attempt to craft an inflexible "one-size-fits-all" formula would run afoul of applicable statutory and constitutional criteria.

The Electric Utilities have also examined the specific claims of many of the commenting parties and have found some of them to contain incorrect statements or blatant attempts to protect a commenter's own financial position without regard to fact. Where possible given the difficulty of obtaining generally available, industry-wide evidence, the Electric Utilities herein present additional evidence and support in rebuttal to the initial comments of various parties to this proceeding.

## II. GENERAL MATTERS

### A. Necessity of Recognizing Differences Between Electric Utilities

A number of the commenters suggest that the Electric Utilities have failed to provide evidence, or, alternately, that an industry standard or practice exists which contradicts the position of the Electric Utilities. The Electric Utilities recognize that these comments were made at a stage where the only "evidence" on the record was the Whitepaper, and that no other parties had yet filed comments. Comments regarding the lack of, or alternately, the

existence of, industry norms demonstrate one of the greatest dangers underlying this proceeding.

There is, by and large, no "standard" among utilities in their operations or requirements -- there are only general guidelines or minimum requirements. Electric utilities are largely not owned by one entity. In fact, federal law has for years rendered such ownership difficult and imposed significant restrictive regulations. The Electric Utilities are subject to varying state standards and practices established by state utility commissions, including accounting practices, safety regulations, state OSHA requirements and state highway and transportation regulations.

The Electric Utilities have also adopted or developed different standards, operations, practices and protocols in response to widely varying geographical, geological and climactic conditions. Against this backdrop, it is apparent that no single standard can meet all of the relevant statutory and constitutional criteria, and that only "presumptively" applicable guidelines should be established by the Commission.

B. Statutory and Constitutional Criteria

The statute clearly sets forth the purpose of the formula, which is to provide "rates, terms and conditions [which] are just and reasonable...."<sup>3</sup> This statutory requirement is not intended to be "applicable to the industry as a whole" or to be satisfied by "general applicability to an assumed class' criteria." Any formula adopted by the Commission must comply with the statutory criteria when applied to each individual utility. While the Commission can adopt general formulas and guidelines, each utility must be able to substitute individual criteria in its calculation of any formula in order to meet the objectives of the

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3. Section 224(b)(1), Communications Act of 1934, 47 U.S.C. § 224(b)(1), as amended ("1934 Act").

statute and avoid impermissible harm. Any formula must be only presumptively applicable, and the presumption must be open to rebuttal so that individual utilities may demonstrate that the formula, as applied to it, either contains invalid assumptions or fails to account for individual situations, the consideration of which prevent the electric utility from recovering the costs for which the statute contemplates recovery.

The applicable constitutional criteria require the same result. While, as noted in their initial comments, the Electric Utilities believe that the statutory provisions are unconstitutional on their face, the Electric Utilities also note that even if the statute is not facially unconstitutional, the Commission can separately and independently violate the same due process takings provisions of the Constitution by adopting formulas which result in a confiscatory taking of utility property.

C. Negotiated Rates the Norm

USWEST and BellSouth encourage the Commission to adopt policies which encourage negotiation and reliance upon negotiated rates. BellSouth suggests that the Commission's complaint procedures should not be available to challenge a rate voluntarily agreed upon. The Electric Utilities agree and believe that private contracts should be supported by the Commission for the same reason. Private contracts are the best evidence of the successful private negotiations encouraged by the Act.

In contrast, WorldCom, Inc. suggests that rates must be published, and that most favored nation ("MFN") treatment must be afforded all attachers. The contentions of WorldCom, and similar arguments, should be rejected. Publication and MFN requirements are contrary to the statutory scheme, which contemplates negotiated rates as the norm, and would be tantamount to requiring the use of filed tariffs. The U.S. Court of Appeals for the Eighth Circuit's recent decision in *Iowa Util. Bd. v. FCC*, \_\_\_ F.3d \_\_\_, No. 96-3321,

slip op. at 115-117 (8th Cir. 1997), invalidating the Commission's pick-and-choose rules originally adopted in *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-98, First Report and Order, 11 FCC Rcd 15499 (1996) ("First Report and Order"), supports this analysis.

In *Iowa Utilities*, the Court reaffirmed that the 1996 Act was designed to promote negotiated and binding agreements. *Id.* at 115. The Court noted that if the pick-and-choose provisions were to stand, negotiated agreements would never be binding because an interconnecting party which entered into an agreement could, unilaterally, incorporate more advantageous provisions contained in subsequent agreements negotiated by other carriers. *Id.* at 116. The Court thus invalidated the pick-and-choose rules. *Id.* at 117.

Similarly, requiring uniformity of rates, terms and conditions among a utility's pole attachment agreements, and consequently granting MFN status to each attacher as advocated by WorldCom would "thwart the negotiation process and preclude the attainment of binding negotiated agreements." *Iowa Util.* at 116. As demonstrated by the Electric Utilities, an absolute bar against all differentiation among a utility's pole attachment agreements, without permitting a showing that the differences are not discriminatory, would undermine any incentive attachers and utilities might have to negotiate. Electric Utilities Comments at 22-25. The Commission would, if it adopts an inflexible and binding pole attachment pricing formula, establish an impermissible *de facto* tariff and would undermine the purposes of both the 1996 Act generally and Section 224 specifically. Electric utilities must be free to negotiate just and reasonable terms and conditions into their agreements with attaching entities and be secure in the knowledge that the Commission will uphold the terms of such

freely negotiated agreements provided they are neither unjust or unreasonable nor *unreasonably* discriminatory.

D. Utility Poles and Conduits are Not "Essential Facilities"

TCI's paean to the essential facilities doctrine is unavailing. TCI Comments at 2-6 (claiming "poles, ducts, conduits, and rights-of-way are essential facilities") (*citing MCI Communications v. American Tel. & Tel. Co.*, 708 F.2d 1081, 1132-33 (7th Cir.), *cert. denied.*, 464 U.S. 891 (1983) ("*MCI v. AT&T*"). First, the case cited by TCI does *not* stand for the proposition that utility infrastructure constitutes an essential facility for cable attachers, nor does the case discuss electric facilities *at all*, and TCI cites no other authority for the proposition that would render "poles ducts, conduits and rights-of-way" essential facilities.

More importantly, application of essential facility analysis to electric company poles, ducts and conduits does not support a conclusion that electric utilities have engaged or will engage in prohibited conduct. One of the elements of demonstrating that a structure or service is an essential facility is that the party seeking access is unable to duplicate, practically or reasonably, the desired facility. *City of Chanute v. Williams Natural Gas Co.*, 955 F.2d 641, 647 (10th Cir.), *cert. denied*, 506 U.S. 831 (1992); *City of College Station v. City of Bryan*. 932 F.Supp. 877 (S.D. Tex. 1996) (*citing MCI v. AT&T* at 1133; *TCA Building Co. v. Northwest Resources Co.*, 873 F.Supp. 29, 39 (S.D. Tex. 1995)). As suggested by the Electric Utilities in their Comments, there are several viable options, other than wired attachments to utility and LEC poles, available to video and telecommunications service providers. Electric Utilities Comments at 11-12.

In fact, TCI's conclusory allusion to the essential facilities doctrine raises more questions than it answers. The first step in any essential facilities inquiry must be identifying the market and feasible alternative facilities, for "as the word 'essential' indicates, the [party seeking access] must show more than inconvenience . . . ; he must show that an alternative to the facility is not feasible." *Alaska Airlines, Inc. v. United Airlines, Inc.*, 948 F.2d 536, 544 (9th Cir. 1991) (quoting *Twin Labs., Inc. v. Weider Health & Fitness*, 900 F.2d 566, 569-70 (2nd Cir. 1990), and citing *MCI v. AT&T; Olympia Equipment Leasing v. Western Union Tel. Co.*, 797 F.2d 370 (7th Cir. 1986), cert. denied, 480 U.S. 934 (1987)). TCI's analysis is far too narrow. TCI focuses on the alleged infeasibility of duplicating pole and conduit networks. TCI Comments at 4. Even assuming, *arguendo*, that such duplication is infeasible, which it is not, does not compel the conclusion that electric utility poles and conduits are essential facilities. TCI's analysis completely ignores the numerous avenues available for the transmission of video and telecommunications signals other than placing wires on poles and in conduits.<sup>4</sup> Given the fact-intensive and complex nature of an essential facilities analysis, TCI's sparse 4-page showing does little to resolve the question or further the purposes of the instant rule making.

### III. DIFFERENCES BETWEEN ELECTRIC AND TELECOMMUNICATIONS FACILITIES

There are a number of differences between electric and telecommunications utilities that impact many of the underlying pole attachment assumptions and obligations, including

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4. See *Florida Fuels, Inc. v. Belcher Oil Co.*, 717 F.Supp. 1528, 1533 (S.D. Fla. 1989) (citing *MCI v. AT&T* at 1148 and noting that the *MCI* court, in determining that AT&T's long distance circuits were not essential facilities, contemplated that MCI "should be willing to expend hundreds of millions of dollars" in light of the income to be derived from providing competitive long distance services).

the assumptions as to pole height and accounts to be included in calculating rates. The differences include, but are not limited to, the following:

A. Differences in Operations

Major differences in the operation and use of distribution facilities by telephone and electric utilities dictate different regulatory treatment of each of their pole facilities for the purposes of establishing a pole rate formula. Many of these differences are apparent from even a cursory review of the comments filed by the parties in the first round. The operational and usage differences, as detailed below, support a finding that the Commission should develop different presumptively applicable formulas or guidelines for telephone and electric utility plant.

B. Differences in Poles

The primary difference between telephone and electric poles is in their size. Typically, electric utilities use 30-50 foot poles<sup>5</sup> while telephone utilities use smaller, 25-35 foot poles.<sup>6</sup> Electric utility poles generally are also larger in diameter due to the greater loads they carry. The difference in height is driven partly by the fact that greater space is required for electric conductor and ancillary equipment than is needed by telephone utilities. The high voltages carried by electric poles also impose certain safety considerations on electric utilities which may not apply to telephone wires and cables.

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5. The Electric Utilities note, however, that the recent increases in installation of taller poles is due substantially to the space requirements demanded by multiple new attachers, or multiple attachments by current attachers.

6. The pole sizes are for non-joint use poles, that is, poles installed by each utility for its own use.

### C. Differences in Conduit

Electric and communications conduit systems are simply not comparable, and rules set for one do not work for the other. Because of the fundamental differences between these two types of conduits, the Electric Utilities take no position on how communications conduits should be treated in this rule making. Likewise, the Electric Utilities request that the Commission recognize the fundamental differences between electric utility and telephone utility conduit systems and avoid fashioning rules for electric conduit based on practices and facts more appropriately related to communications conduit systems. Among the differences which have been demonstrated by the Electric Utilities in their initial Comments, or supported by comments of other parties in the first round of this proceeding, are the following:

- Electric conduit carries high voltage and electric current.
- Electric conduit is typically encased in concrete for safety and heat dissipation whereas telephone conduit is not.
- Electric conduit is substantially more expensive to construct and involves significantly greater safety considerations than telephone utility conduit.
- Individual ducts in an electrical conduit, subject to very narrow exceptions, cannot share both electrical and communications cabling. Such cabling must be placed in separate ducts whereas numerous communications cables can be placed in the same duct.<sup>7</sup>
- Electrical hazards require strict control over the training and experience of personnel permitted to work in electric utility ducts, whereas there are no similar requirements for personnel working in telephone utility duct banks.

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7. This fact alone demonstrates that the half duct methodology is not applicable to electric utilities.

D. Differences in Accounting

Communications utilities are subject to the FCC imposed system of accounts. Electric utilities are subject to the FERC imposed system of accounts. These systems provide for substantially different treatment of expense accounts, and the use of different account titles and separations for the booking of expenses and capital expenditures.

E. Conclusion

As a result of these substantial differences in the type, use and function of the facilities of telephone and electric utilities, the Electric Utilities believe that it is essential that separate rules, and only presumptively applicable rate calculation formulas, be adopted for attachments to electric poles and duct systems and communications poles and duct systems.

IV. THIRTY-FOOT POLE ASSUMPTIONS

There are a number of interrelated sub-issues relevant to the treatment of electric utility thirty-foot poles. These issues involve investigating the inclusion of thirty-foot poles in the calculation of average electric utility pole height, the location of attachments on electric utility thirty-foot poles and the establishment of a separate formula for thirty-foot poles.

A. Attachments and Thirty-foot Poles

Several of the commenters indicated that thirty-foot poles were not extensively used for attachments, and some commenters even indicated that there was no charge for attachments to thirty-foot poles. Both of these assertions are ludicrous, clearly contrary to the facts, and fly in the face of overwhelming evidence to the contrary.

Ample space exists for multiple attachments on electric utility thirty-foot poles. The cable companies concede that they attach to thirty-foot poles, even while they admit that they

may, in some instances, have been engaging in a practice of doing so without paying compensation to the electric utility.<sup>8</sup> The Electric Utilities' space allocation chart for thirty-foot poles<sup>9</sup> demonstrates the spacing available to multiple attachers on electric utility thirty-foot poles. Electric Utilities Comments at 30; Figure 2. The photographs supplied with the initial comments<sup>10</sup> also demonstrate that it is not only possible, but standard practice, to attach multiple parties to electric utility thirty-foot poles.

Indeed, where separate data is kept on attachments to only thirty-foot poles, the data demonstrates that cable attachments are common, and that multiple attachment are made where needed. CP&L calculates that approximately 20% of its thirty-foot poles have CATV attachments, while almost ten percent have at least two attachments. Tampa estimates that 16.5% of its thirty-foot poles have attachments. As is apparent from even this limited available information, thirty-foot poles are used for at least one attachment and can accommodate two or more attachments. That the Electric Utilities need to even present this data seems redundant and unnecessary, as the cable companies admit that they extensively use electric utility thirty-foot poles for attachments, including, but not limited to, attachments to extend drop lines to houses.

B. Proper Treatment of Thirty-foot Poles in Calculations

The Electric Utilities are not advocating the elimination of thirty-foot poles from the pricing formula, as some commentators seem to assume. The Electric Utilities, rather, recommend that thirty-foot poles be accounted for properly. This requires establishing two

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8. See Declaration of John R. Eiseman, para. 3, Comments of NCTA.

9. These were originally supplied in support of the Electric Utilities' initial comments. Both charts are attached hereto for convenience. See Exhibit 1.

10. Joint Comments, Exh. 1, photographs 1 and 2.

separate categories of poles -- one for those thirty feet (30') and under and one for those thirty-five feet (35') and over. For purposes of this discussion, the Electric Utilities will refer to all poles thirty feet and under in height as "Type S" poles, and those of thirty five and greater in height as "Type T" poles. In the following discussion, the term "unified rate" will be used to refer to the current practice of performing one calculation for all poles.

The following differences require separate treatment of electric and telephone utility plant,<sup>11</sup> and the separation of thirty-foot poles into a separate class for electric utilities:

- Electric utilities need substantial clearance for safety separation between primary and secondary circuits, which carry different voltages. As a result, thirty-foot poles cannot be used by electric utilities for primary distribution which represents a significant portion of the electric utilities' systems.
- Telephone utilities need only one to three feet of separation, under most circumstances, when no electric utility attachments are present, making the use of thirty-foot poles standard in their industry.
- Thirty-foot poles can be and are used by electric utilities for lower voltage secondary distribution. Secondary electric lines do not have the same space requirements as primary lines. Accordingly, a thirty-foot pole can and does accommodate both electric secondary lines, cable and communications lines, but space allocation is quite different from that on 35-50 foot poles, and this materially impacts cost allocation under Section 224(d) of the Act.

C. Confiscatory Result of Failing to Provide for Two Separate Calculations

The Electric Utilities' recommendation to provide for two separate calculations has a substantial impact on the recovery of pole attachment costs of the Electric Utilities. Failure to separate poles into two separate categories for calculation of rates will cause confiscatory pole attachment rates for the Electric Utilities.

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11. As repeatedly stated herein, the Electric Utilities make no suggestions as to how pole attachment rates should be set for the telephone utilities -- this issue should be left for the telephone utilities and the Commission to decide.

## 1. Dilution of Pole Cost Calculation

One distinct problem with including all electric utility poles in one category stems from the fact that inclusion of thirty-foot poles in the calculation of average pole height dilutes the assumed cost of *all* poles because thirty-foot poles are significantly less expensive, causing a substantial under-recovery in attachment rates for electric utility poles which exceed 30 feet. These cost differences result from two factors -- (i) the lower raw cost of thirty-foot poles as opposed to taller poles, and (ii) the substantially depreciated nature of this historical investment as opposed to the less depreciated, and therefore more costly, investment in newer, taller poles. These differences lead to a dilution of pole costs which impermissibly causes an artificially low pole attachment rate to be set for all poles, regardless of height.

The pole cost dilution is exacerbated by the relatively high percentage of thirty-foot poles included in the unified rate calculation. As is evident from Table 1 attached hereto, available data indicates that between sixteen and thirty five percent (16-35%) of electric utility poles are thirty feet (30') or under in height. In contrast, the majority of attachments are made to poles thirty five feet (35') or taller in height. Dilution of the attachment rate for taller poles by a large number of shorter, cheaper poles leads to the establishment of a confiscatory rate.

The dilutive impact on the average pole cost caused by inclusion of thirty-foot poles is clearly shown in the following hypothetical. The raw cost for thirty-foot poles, prior to installation, is approximately \$86.00. The raw cost for forty-foot poles is approximately \$195.00. For purposes of illustration, we will assume a situation in which thirty-foot poles comprise 33 1/3% of all poles and a pole system of 300,000 poles -- 100,000 thirty-foot poles and 200,000 40 foot poles. Using the above numbers, the average cost per pole is

reduced to \$158.67 per pole under a unitary price. This, in effect, reduces the cost of 40 foot poles, on which the majority of attachments are made, by 18.6%.<sup>12</sup> Although it would appear that the same calculation would result in an overrecovery in pole costs for poles 30 feet and shorter, due to issues related to crossarms and space allocations, a confiscatory rate is also set for thirty-foot and shorter poles, as discussed below.

## 2. Lack of Crossarms on thirty-foot Poles

Another distinction between thirty-foot poles and those 35 feet and taller is the lack of crossarms on thirty-foot poles. The Commission has traditionally applied a fifteen percent (15%) reduction to the pole attachment account, FERC Account 364, to take out cross arm investment, which has generally been believed to benefit only the electric utility.<sup>13</sup> As crossarms are typically not used on thirty-foot and shorter poles, the application of the reduction to them is inappropriate. A brief examination of the data available to the Electric Utilities during the short period of this proceeding demonstrates that less than one percent (1%) of thirty-foot poles tend to have crossarms. *See* Table 2. In contrast, crossarms tend to be used much more frequently on distribution poles of thirty five feet and taller. The Electric Utilities believe that the fifteen percent reduction for crossarms should continue to be applied to the pole plant capital account, but that the reduction should not be applied to the investment in pole plant for poles thirty feet and shorter in height.

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12. Even when the number of thirty-foot poles is 20%, the result is an underrecovery of pole cost for forty-foot poles of 11%, a material amount.

13. The Electric Utilities note that even this logic is flawed. Crossarms benefit all attachers in some ways that are not so apparent, which have not been brought to the Commission's attention in the past. By moving all of the electric utility's attachments into a horizontal space, the cross arm provides more space for other attachers, without them having to incur as much make-ready expense. In addition, as electric lines provide a zone of protection against lightning, their placement on cross arms greatly widens the protection afforded the underlying attachers.

### 3. Space Allocation Differences on Poles

Space allocation is perhaps one of the most important components of the pole attachment formula. Each attacher on a thirty-foot electric utility pole, including the electric utility, uses the same amount of space -- one foot. An allocation of one foot out of three feet of usable space (33%) is substantially different from an allocation of one foot out of eleven feet (9.1%) or even one foot out of thirteen and one-half feet (7.4%). When applied to the cost per pole, loaded with carrying costs, the differences in the pole attachment rate are significant, and results in a confiscatory underrecovery of 25.9 percent. As there is a dramatic difference between spacing allocations and use of electric poles at the thirty-foot break point, in order to establish just and reasonable rates the Commission should permit the Electric Utilities to account for these differences by recognizing two categories of poles with two different calculations and rates.

When applied to hypothetical cost data for Type S and Type T poles, the greater space allocation percentage for Type S poles results in a larger percentage of a lower cost base being assigned to the attacher. Similarly, when the proper allocation is applied to the higher cost base Type T poles with thirty-foot poles removed, it results in a lower percentage assigned to a greater cost base. In both cases, the pole attachment rate increases significantly, indicating the magnitude of the error in the Commission's traditional formula.

The underrecovery of poles costs, arising from the failure to separate poles into classes that more accurately capture their space allocations and cost bases, is not insignificant, despite the contrary characterizations of some cable companies.<sup>14</sup> The

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14. See, Time Warner Comments at 3, 10. While these increases may not be significant to the huge bottom lines of the cable giants, they are significant to the more modest bottom lines of many electric utilities and their customers.

disparity is increased further when one calculates the impact of the crossarm deduction on poles of thirty feet and under, and of the currently improper allocation of the forty-inch safety margin. The Electric Utilities submit, especially in light of the recent Eighth Circuit opinion, that the failure to adopt formulas that permit a more accurate capture and calculation of costs would be impermissibly confiscatory.

## V. AVERAGE HEIGHT OF POLES

A number of parties have argued that the average pole height for electric utilities has not increased. Nothing could be further from the truth. It has been a number of years since the Commission first adopted its presumed average pole height of 37.5 feet, and common sense dictates that neither the communications nor the utility industry has remained static. The number of communications parties participating in this proceeding, the explosion in the number of communications providers and the expansion in the number of services to be delivered over wire to the home are all testament to the increasing demand for space on poles. Due to spacing and loading requirements set forth by the NESC and engineering principles, the Electric Utilities have had to invest in taller poles.

The activities of the very same parties who want to attach, and who argue that taller poles are not being used, are the primary cause for electric utilities' substantial investment in new, taller poles. This substantial investment in new, taller poles is required both by safety code requirements regarding primary/primary and primary/secondary separation with higher power load demands in many communities, and also by the spacing and pole height

requirements imposed by the communications attachers, whether due to new attachments or the additional spacing required through the practice of extensive overlashing.<sup>15</sup>

Reviewing only the data from the utilities set forth in Table 3, it is apparent that the adoption of an average pole height of 41 feet would be reasonable. The retention of a 37.5 foot pole height is no longer supported by industry experience.

When the investment in poles of thirty feet in height and under is separately calculated, however, two average assumed heights need to be calculated. Due to the fact that twenty-five-foot and smaller poles are used very little by the electric utilities, in contrast to their use by the telephone utilities, an average pole height in the thirty-foot and under category should be thirty feet.

Obviously, when poles over thirty feet are placed in a separate category, the average pole height of such poles increases. The average unified pole height for the Electric Utilities that provided reporting data is 39.6. Assuming averages for thirty-foot poles of 20% and 30% of total poles, the average height for Type T poles would be 42 feet and 43.7 feet, respectively.<sup>16</sup> The Electric Utilities suggest that, at a minimum, a conservative forty-foot (40') average pole height be used in making the pole attachment rate calculation for the taller category of poles. The empirical evidence in this proceeding demonstrates, therefore, that the average pole height for Type S poles should be thirty feet, and for Type T poles should be 40 feet, as suggested in the Electric Utilities' initial Comments at pages 27-43. It is also

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15. An example of the additional pole height commonly required by today's demands for new attachments, including multiple attachments by the same party totaling more than the one foot (1') allocation, is demonstrated by the photographs attached hereto as Exhibit 2 taken from TECO's Service Territory.

16. The derivation calculations are as follows:  $[39.6 - (.20 \times 30)] \div .8 = 42$ ;  $[39.6 - (.30 \times 30)] \div .7 = 43.7$ .

apparent that the space on these poles should be allocated as proposed by the Electric Utilities and consistent with actual usage in the field.

## VI. AVERAGE GROUND CLEARANCE

The comments evidenced a substantial misunderstanding of issues related to ground clearance. A number of the parties indicate in their comments that somehow the NESC mid-span ground clearance requirements *decreased* with the 1990 revision of the NESC. These allegations are clearly unfounded and are based on a fundamental misunderstanding of the Code and the changes which took place in the 1990 revisions to the Code. Prior to delving into a detailed discussion of sag and clearance, it may be instructive to identify the relevance of these arcane and technical arguments to any pole attachment formula.

### A. Relevance of Sag on Pole Attachment Calculation

The cable-to-ground clearances required by the NESC and applicable state and local ordinances determine the minimum elevation at mid-span, which, in combination with an allowance for sag, will determine the height on a pole where an attachment can be made. If there were no sag, that is, if cables were line-of-sight, the mid-span clearance would be the pole attachment height. Cables cannot be line of sight, however, because sagging does occur due to the basic effects of gravity, line weight, ambient temperature and span distances.<sup>17</sup> Ice and wind loading functionally increase line weight and, along with thermal loading on the conductor, causes additional line sag or stretching. *See Davis Report.*

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17. Cable companies will sometimes go to extremes to meet their mid-span requirement and avoid either having to locate higher on a pole or insist on make ready. *See Exhibit 3*, which shows an attachment being held up at mid-span with a rope.

Cable attachments have traditionally been assigned a pole usage "space" of one foot (1'). The Electric Utilities argue that this is a minimal and unduly conservative calculation of usable pole space. In instances in which the sag experienced by an attacher is significant, the attacher must raise its position on the pole to accommodate this additional sag and meet the required ground clearances. This need to increase its position on the pole has a significant impact on the pole, vis-a-vis the pole owner and other attachers. More pole space is consumed by the attacher and that space becomes unavailable for use by another party. As communications cables are always below those of the electric utility, the pole consuming costs of communications cable sag should be allocated to the communications provider directly responsible for satisfying the clearance requirements.<sup>18</sup> The Electric Utilities' proposal to allocate this additional clearance to "unusable" space is actually conservative and favors the attachers who should logically be allocated this additional space.

B. Understanding Sag and Clearance Requirements

Through the 1987 edition, the NESC required a mid-span clearance of eighteen feet (18') over roadways. *See* NESC Handbook at 191-95. This mid-span clearance was established for assumed operating conditions of sixty degrees fahrenheit, and without sag-inducing loading. *Id.* This height was presumed to provide adequate clearances after average sag-inducing effects of thermal and ice loading.

In 1990, the NESC was changed, but the change was primarily one of philosophy. *See* Davis Report; NESC Handbook at 191. Instead of establishing one standard height for all installations under *normal* operating conditions, the NESC began to require the "closest

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18. Exhibit 4 contains a photograph showing the amount of pole space and clearance required by today's communications attachments, due both to multiple cables being attached by each party and to other spacing requirements.