vertical approach" after full consideration of *final maximum* sag loading. *Id.*, NESC Handbook at 193-94. Under the post-1990 NESC, the ground clearance requirements were changed to a *minimum* of 15' 6" clearance from the ground, mid-span, under *worst case conditions*. *Id.*

The underlying assumption in the change was that in many circumstances, thermal and ice loading would create a sag effect of approximately 2 1/2 feet -- thereby creating the change from 18 feet to 15.5 feet. *See* Davis Report. There was no actual *change* in *clearance*, but rather a *change* in *method of calculation*. In order to fully appreciate the clearance requirements, however, one must calculate the *maximum* sag to be experienced over the life of the line in question. This calculation will dictate generally that lines must be *initially* strung at a mid-span height of eighteen feet (18') *or higher* to properly account for sag.[19]

Sag is induced by a number of factors, including thermal loading of the conductor (not ambient heat), weight of the line itself, ice loading and wind displacement. See NESC at 72, Rule 232A; NESC Handbook at 195, 328. Ice loading is determined by the "radial ice" deemed to have formed on individual lines according to the General Loading Map located in the NESC, Figure 250-1. *See* NESC at 148, Rule 250. The more ice loaded on a line, the more sag that is induced and the higher initial clearance that the line must have.

Radial ice is calculated per strand. *Id.* at 148; NESC Rule 250; NESC Handbook at 328-33. Electric utility lines tend to consist of a single cable. Communications lines tend to be comprised of at least two (messenger and communications cable) and sometimes several

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19. Davis Report. *See* Allen Clapp's DANESC UPDATES for Fall 1990 and Spring 1991 for discussion of NESC clearance and sag calculation changes, attached hereto as Exhibit 5.

cables, especially in instances of overlashing. *See* Davis Report; NESC Rule 251A at 152. The radial ice loading must be increased in direct proportion to the number of individual cables in the attachment (due to greater surface area). NESC at 152, Rule 251A; NESC Handbook at 334. This substantially increases the sag calculation of the communications cable and, in turn, increases the cable's required midspan clearance height. An increase in clearance height greatly increases the height on the pole at which the communications provider must attach to meet the minimum criteria.

The Electric Utilities have prepared sample calculations of communications sag under varying conditions, and the pole placement necessary to ensure compliance with NESC clearance requirements. Average span lengths for the Electric Utilities are approximately 200 feet, with substantial variance. Average span lengths for Delmarva and CP&L are 240 feet, Tampa Electric and Virginia Power are 150 to 200 feet, and an average downtown placement may be as short as 75 feet.

Sample sag calculation charts are attached hereto. *See* Davis Report. These show that under the loading conditions experienced by Delmarva, for example, pole attachment heights should be set to account for a total sag of 3.3 to 6.75 feet. *See* Davis Report. This requires a minimum pole placement for such attachments of 18.8 to 22.25 feet. *Id.*

In addition, many of the attachments used by communications companies experience more than the average amount of sag. Fiber optic cable, for instance, contains no metallic elements. When strung without a messenger, this type of attachment has a tremendous ability to sag, from 23 to 90 inches, requiring higher than normal clearance and pole placement.[20] Cable companies tend to hang an excessive number of amplifiers, splicing

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20. *See also* Davis Report; Exhibit 6, consisting of CATV sag tables from Times Fiber Communications, Inc.' Exhibit 7, consisting of photographs of sag and overlashing.

boxes, cable connectors, expansion loops and other equipment from their lines, as well. *See* Exhibit 8, photographs and a separation diagram from Bell Atlantic. Each of these add weight in themselves, increase clearance requirements both to the ground and to any other attachment, and contribute to additional sag through ice and wind loading.

Most important, however, is the common practice of overlashing, specifically referenced in the comments of several parties, including AT&T. *See* AT&T Comments at 6. Not only do these attachers want a free ride by obtaining an exemption from paying for the extra loading and space taken on poles through overlashing,[21] they fail to recognize the substantial effect that overlashing has on clearance degradation[22] and the additional weight or tension on a pole requiring stronger poles. As overlashing adds to the number of individual cables in an attachment, ice and other loading factors must be increased for the number of individual cables to determine the total clearance requirement.

The communications attachers misconstrue the clearance argument and the applicability of the rules and NESC. As demonstrated, the change in the NESC did not lower the clearance height, but merely changed how it is calculated. As a consequence, when factoring in the amount of sag experienced for many communications cables, the amount of sag related clearance actually increased. Hence, the amount of pole space consumed by the communications companies also increased.

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21. As explained below, the "free ride" requested by AT&T would appear to be implicitly disapproved of in *Marcus Cable Associates v. Texas Utilities Electric Company*, P.A. No. 96-002, Declaratory Ruling and Order, DA 97-1527, released July 21, 1997.

22. *See* Exhibit 6 and photographs at Exhibit 7.

C. Other Additional Clearance Requirements

In addition, under various scenarios, ground clearances much greater than 15' 6" at mid-span are required. Significant exceptions to the 15' 6" mid-span clearance rule include the following:

1. Department of Transportation Requirements

Many state departments of transportation require much higher mid-span clearances. The Departments of Transportation for the states of Virginia, Delaware, North Carolina and Maryland, for example, all require a minimum of 18 feet of mid-span clearance over roadways under worst case conditions.[23] In these states, the NESC clearance requirements must be increased by another 2 1/2 feet to be incompliance with state law.

2. Interstate Crossings

Many states require higher clearances for lines crossing interstate highways than for lateral lines along highways.

3. Railroad Crossings

The NESC requires a minimum clearance for communications cables of 23.5 feet over railroad tracks. *See* NESC Table 232-1, line 1.

4. Commercial Areas Subject to Extended Height Traffic

The NESC requires a minimum clearance for communications cables of 15.5 to 16 feet over high traffic commercial areas.

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23. See Letter from W.G. Marley, Jr., P.E., State Highway Administrator, dated July 26, 1991; excerpt from Commonwealth of Virginia Land Use Permit Manual, dated January, 1983 (discussing regional clearances), attached hereto as Exhibit 9.

5. Farm Areas (General Transport)

The NESC requires a minimum clearance for communications cables of 15.5 to 16 feet over farming and grazing areas. *See* NESC Table 232-1, line 4. As noted earlier, this is under worst case conditions, effectively requiring at least 18 feet at mid-span under normal conditions.

6. Farm Fields (Mechanized Cotton Pickers and Combines)

The NESC requires a significantly higher minimum clearance for communications cables over farming areas subject to the use of higher than usual equipment, such as cotton pickers and combines.

7. Waterways

The NESC requires a minimum clearance for communications cables of 17.5 to 37.5 feet over water areas where sailboating may take place. *See* NESC Table 232-1, line 7.

8. Other Clearance Requirements

California and other state public service commissions sometimes require clearance in addition to those of the NESC. Additional clearances are also required around building structures.

9. Lower Clearance Requirements; The Exception

Assertions by other commenters that lower requirements widely apply are deliberately misleading. The Electric Utilities are aware of only two primary areas in which lower mid-span clearance limits apply. These exceptions consist of so called "rear lot" construction, crossings over pedestrian walkways and crossing over small waterways where sailing is prohibited.

Rear lot construction, that is, construction between lots behind buildings, pedestrian walkways and rural walkways are generally subject to lower clearance standards of 9.5 feet

(for pedestrian walkways) or 13.5 feet (remainder). *See* NESC Table 232.1, lines 5 and 10. The rear lot and pedestrian walkway clearances apply most often to drop lines when neither a driveway or thoroughfare are crossed. These clearances do not apply, however, in instances in which the rear lot consists of an alley, driveway or other public or private throughway, or rural roads where there is likely to be any vehicular traffic. These clearances also do not apply when there are any structures on or near to the rear lot construction. For Delmarva, the rear lot exception applies only 5% of the time, and the Electric Utilities estimate that it generally occurs less often than this for most utilities. Likewise, crossings over small waterways where sailing is prohibited are subject to a clearance height of 14 feet. This clearance category is clearly limited by its terms, and applies to only a inconsequential number of poles.

D. Conclusion

It is clear that the ground clearance recommendations of the Electric Utilities are factually based and conservative. The minimum clearances imposed by the NESC for worst case conditions and highway crossing requirements dictate that the location of the lowest attachment at the pole be higher than the nominal mid-span minimum clearance to allow for sag. Those parties who suggest that the unusable space below the lowest attachment should not be increased to 19.2 feet or more for 40 foot poles are simply wrong and the facts do not support their position.[24]

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24. In light of the confusion that may surround sag calculations, we suggest that the Commission may want to consider employing an independent NESC engineering expert for consultation. A general reference for clearance calculations in pages 225-232 of the NESC Handbook.

VII. ALLOCATION OF SAFETY SPACE

A. Examination of the Safety Space Requirement Makes the Proper Allocation of its Cost Apparent

In addition to the arguments advanced by the Electric Utilities in their Comments demonstrating why the cost of the forty-inch (forty-inch) safety space should be allocated to the communications attachers, and in rebuttal of the comments of the communications attachers, the Electric Utilities assert that the traditional treatment of this space by the telephone utilities further supports its allocation to the communications attachers.

1. Forty-inch Safety Zone Required for the Safety of Communications Workers

The safety zone of forty-inch is required by communications workers because they are not qualified to work near energized electrical cables. *See* NESC Handbook at 308. Communications workers normally access their cables by climbing the pole, or using a ladder or bucket truck. Regardless of the type of access used, the telecommunication employees, while working on their cables, require a forty-inch (forty-inch) safety zone below the electrical cables because the employee often has to do work on cables chest high. This places the employee's head, shoulders and arms above the communications cable and in a position where the employee could inadvertently make contact with an electrical cable. The NESC acknowledged over 50 years ago that the forty-inch safety zone was set aside in order to allow head room for telecommunications workers. *See* NESC Handbook at 294. This same need exists today. Telecommunications employees must have the forty-inch safety space because they are not qualified to work around electrical cables and their upper body would otherwise be exposed to electrical cables when working on communications cables. By contrast, electrical workers do not need the forty-inch safety space because they are qualified to work around energized electrical cables.

2. Electric Utilities Lose 40 Inches of Usable Space Due to Presence of Communications Facilities

Due to the safety zone required for communications companies, the electric utility loses forty-inch of usable space when a communications company makes its attachment to an electric utility pole. Electric utility poles are installed for the primary purpose of attaching electrical conductors horizontally from pole to pole. When a communications attachment is installed on a pole, the electrical utility loses forty-inch of space that could be used for making these horizontal electric conductor attachments. The communications company that causes the loss of this usable space due to its own safety requirement should be allocated this forty-inch of usable space.

3. Safety Zone Required for Electric Service is Allocated as Usable Space to Electric Utility

Electric utilities are already allocated the space that is required as a safety zone between their primary cables and their secondary cables. This zone is normally a minimum of forty-inch - 45" on a pole, and is part of the 7.5 feet allocated to the electric utilities under the current formula. All of this safety zone between the primary and secondary cables is required for the electric utility, but it cannot be used by the electric utility for the primary purpose of installing horizontal cables from pole to pole. If the electric utility is allocated this entire safety zone as usable space, it follows that the telecommunications company that requires the forty-inch safety zone should similarly be responsible for the safety space it requires and which it takes away from the electric utility pole owner. That space can no longer be used to accommodate electric conductors and is for all practical purposes confiscated from the electric utility pole owner.

4. Arguments Regarding Placement of Lights Are Irrelevant

The communications attachers argue that placement of street lighting within the safety space justifies the assignment of the cost of this space to the electric utilities. This argument is irrelevant to the allocation of pole costs, and relies on factually incorrect statements.

Pole lights are placed in position as to achieve, usually municipally required, illuminations standards. The height on the pole is determined by the amount of illumination required, not by the location of attachments or electric lines on the pole. Streetlight height placement averages around 25 to 27 feet. On forty-foot poles the streetlights tend to fall within the power space, and on fifty five foot poles, tend to be placed within the safety space. Exhibit 10 shows examples of streetlights being placed in the power space. As there is no uniform standard for the placement of such lighting, any argument that such placement has any bearing on the allocation of pole costs is specious.

B. Current Practice is to Share Cost of Safety Space

The electric and local exchange telephone utilities have, for years, recognized that the forty-inch safety space required between electric utility lines and other attachers' cables is the responsibility of the licensee attaching to the owner's poles. When both utilities owned poles, each shared the savings by having usable space on the other's poles, but they also shared the additional expense of not being able to use some space because of the safety clearance requirements. If all of the poles were owned by one company, this concept would dictate that the licensee who's occupancy created the need for the forty-inch safety zone should pay the entire expense for this zone.

Specific examples from among members of the Electric Utilities support this argument. Traditionally, electric utilities and telephone companies have split the forty-inch safety zone equally. As poles were owned by both the local exchange carrier and the electric

utility, this meant, assuming each owned roughly the same number of poles, that the electric utility paid for the 40 inch safety burden it imposed on telephone poles and that the LEC paid for the 40 inch burden it imposed on electric poles. Based upon the historical treatment of this space between the electric utilities and the telephone pole owners, the lack of support for the continued subsidy to cable and the arguments advanced by the Electric Utilities in their initial Comments, the Electric Utilities request that this historical treatment now be adopted for cable and telecommunication provider attachments on electric utility poles, and that the forty inches be allocated equally to the communications attachers. At the same time, the Electric Utilities generally recognize that where they attach to poles owned by communications providers, the forty-inch safety space may be allocated to the electric utility.

VIII. INAPPLICABILITY OF RATE TO TRANSMISSION FACILITIES

Contrary to the assertions of some parties, this rule making proceeding cannot support the setting of a rate for attachment to transmission facilities or the right of way under transmission facilities. While the Commission can adopt rules beyond those originally noticed in an NPRM when an issue has been raised by a party and an opportunity to comment has been afforded to all parties, the issues surrounding the use of transmission space are too complex and the record too inadequate to support the Commission's establishing a formula or other requirements for the use of transmission facilities or rights of way in this proceeding.

A. Comparison of Facilities

To aid in the Commission's understanding of the differences between transmission and distribution facilities and rights of way, the Electric Utilities have attached Diagram 1 which depicts typical transmission structures. These diagrams show the substantial differences in

structure, vertical attachment spacing and horizontal structure spacing between these facilities and transmission facilities, which compare typical pole found along many urban streets. Among the differences in these facilities are the following:

Characteristic	Distribution	Transmission
Structure height	25 feet to 50 feet	70 feet and higher
Distance between structures (span) (except inner city)	100 to 300 feet	600 to 800 feet
Cost of facility (average installed)	$500 to $5,000	$10,000 to $100,000
Unusable and usable space	30 to 55 feet	100 feet and over
Voltage carried	120 to 480 volts (secondary) and 2,400 to 34,000 volts (primary)	over 69,000 volts to 750,000 volts

B. Differences in Raw Costs

Transmission facilities are significantly different from distribution facilities. Voltages carried over distribution facilities vary from 120 to 480 volts over secondary lines (which are closest to communications cables), and 2,400 to 34,000 volts over primary lines. In contrast, voltages carried by transmission facilities typically are 69,000 volts and higher, up to 750,000 volts. The practical effect of these differences are primarily safety related, but they affect the size and cost of towers and rights of way. Transmission facility voltages tend to induce a current in parallel facilities. These induced currents not only cause damage to non-electrical attachments, but they create safety hazards to persons working in the right of way and on wire facilities that run parallel to the transmission line.

C. Differences in Relative Costs

The construction and resultant costs of transmission facilities is much higher than for distribution facilities. A typical pole may cost one to three hundred dollars in raw distribution pole costs, and approximately five hundred to six thousand dollars in total installation costs. In contrast, a transmission tower will cost approximately $10,000 to $100,000 or more per tower to install. The costs per structure are also widely different depending upon the type of structure involved. The proper allocation of these costs will involve significant Commission investigation and consideration before any rate could be set. Insufficient evidence will be contained in this record for such an inquiry.

D. Span Length and Effect on Sag

The differences in span length create a host of new issues to be considered. The parties have spent considerable time discussing line sag, and the impact of sag on pole height and line spacing. As sag is a function of line weight, ambient temperature and loading, and the distance between structures, the differences in span length between distribution and transmission facilities has a substantial impact on sag. In a transmission span of 600 feet, sag could be as much as 7.22 to 20.66 feet for electrical cable alone, and more for CATV. *See* Table 4. Due to the required separations between energized and non-energized facilities, the total tower spacing required to accommodate a CATV attachment could be substantial, at a minimum, forty feet or more. This placement would not permit the required spacing from the transmission primary lines, however, and would make placement on the tower impossible.

E. Cost Differentials

Electric utility costs related to transmission tower investment, operation and maintenance are also different than those used for booking distribution pole investment and costs. In the event that the Commission determines that it will investigate the setting of a formula for transmission tower attachments it will need to gather evidence regarding the proper accounts to be used in a formula. The Commission will also need to consider usable space requirements and their effect on any calculation.

F. Different Reliability Concerns

The transmission grid and the interconnection of transmission systems owned by various utilities is the backbone of our national electrical system. The various Reliability Councils operated around the country have adopted strict protocols to assure reliability and to minimize the risk that a failure in one part of the interconnected system will cause brownouts or blackouts hundreds of miles away. As transmission lines provide the main path for transmitting electricity from power plants to various parts of the distribution system, the loss or removal from service of a segment of transmission line for maintenance or construction affects far more customers than does loss of a segment of the distribution system.[25] The impact that the telecommunications attachments might have on the reliability of the interconnected transmission grid would have to be carefully investigated before any binding rules or guidelines governing access to transmission systems are established, including

25. Due to the inherent dangers of working around transmission lines, even communications installation and maintenance is likely to require taking the line out of service. We note that electric utility customers and state regulators are likely to have limited patience for widespread outages of a life support service for the purpose of providing communications conveniences.

restrictions on maintenance of communications facilities which use transmission towers and rights of way.

G. Easement Agreements and Other Limitations

Transmission lines are generally built on wide easements purchased by the electric utility. Some traverse rural areas while others are in congested urban areas. Although some transmission lands are held in fee, most are held under easement agreements negotiated at different times. Some are very old. Not unexpectedly, there will be a wide variety of conditions and restrictions on authorized uses under various easements. These will vary by vintage of the easement and be affected by state real property laws, which are not uniform. All of these potential limitations on the use of transmission properties will need to be addressed before definitive guidelines governing access and pricing for attachments to transmission towers or rights of way can be promulgated.

H. Safety Considerations

While electric distribution systems present significant safety concerns, due to the extremely high voltages carried, transmission system safety considerations are paramount. These safety considerations must be thoughtfully evaluated by the Commission before any definitive guidelines for transmission access and pricing are promulgated. Only highly trained and specially qualified personnel can work on or around transmission towers. Clearances between communications lines and high voltage electrical conductors will be difficult to assure due to the longer spans and the potential for induced currents. The risks associated with outages on a segment of transmission line have to be factored into any protocols established for access. This is especially true as the national transmission grid is put to new uses, and in ways not heretofore contemplated, in order to facilitate the

development by the Federal Energy Regulatory Commission of a competitive wholesale and retail electricity market.

I. Wireless Attachments

In Comments filed by the Public Service Company of New Mexico ("PNM") and in the Joint Comments filed by The Edison Electric Institute and UTC ("EEI/UTC"), the Commission was urged not to include wireless attachments in any pole attachment formula developed in this proceeding. (PNM at 5, EEI/UTC at 6). The Electric Utilities agree with PNM and with EEI/UTC.

In contrast, AT&T's comments suggest, without support, and without citing the Commission's first statement of this principle, that the Commission should "reaffirm that pole owners may not discriminate among attachers, and that the same maximum permissible rate determined from the Commission's formula applies to each foot of space used by attachments, regardless of the technologies employed or the services provided by the attachments in that space." AT&T Comments at 9. AT&T illuminates its meaning in the very next paragraph. "[R]apid growth of wireless services will present pole owners with increased opportunities to engage in anticompetitive and discriminatory conduct, absent the requested clarification." AT&T Comments at 9. AT&T goes on to argue that if a wireless attaching entity requires a taller pole to effectively transmit its signal, the pole owner should somehow be responsible for such "make ready" costs or that these costs should be borne by all attaching entities. The Electric Utilities oppose AT&T's suggestions to include wireless attachers in pole attachment privileges.

Although Congress intended to assist wireless communications service providers, this relief was provided through the adoption of Section 704 of the Act. Section 704 made federal property available for the location of transmission facilities and encouraged the states

to make governmental property available for antenna siting, and is the sole remedy to any ills experienced by the wireless communications service providers needing sites for their transmissions facilities.

The Commission has stated that Section 704 preserves local zoning authority, but clarifies when the exercise of local zoning authority may be preempted by the Commission; and prohibits any action that would discriminate between different providers of personal wireless services, such as cellular, wide-area specialized mobile radio ("SMR") or broadband personal communications services ("PCS"). Section 704 prohibits any action that would ban altogether the construction, modification or placement of these kinds of facilities in a particular area. In addition, Section 704 specifies procedures which must be followed for acting on a request to place these kinds of facilities, and provides for review in the courts or the FCC of any decision by a zoning authority that is inconsistent with Section 704. Finally, Section 704 requires the federal government to take steps to help licensees in spectrum-based services, such as cellular, SMR and PCS, get access to preferred sites for their facilities. Federal agencies and departments will work directly with licensees to make federal property available for this purpose, and the FCC is directed to work with the states to find ways for states to accommodate licensees who wish to erect towers on state property, or use state easements and rights-of-way.[26]

Not only did Congress not intend to include wireless communications service providers in any relief arising from the pole attachment proceeding, to do so would create a preference for new market entrants over incumbents. Incumbents have negotiated their tower rental rates. The incumbent systems are fully constructed and operational, paying negotiated

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26. New National Wireless Tower Siting Policies, Fact Sheet, issued April 23, 1996 (WTB)

tower rentals. A new entrant would receive a benefit never intended for it by way of a much lower tower rental for its attachment to transmission facilities due merely to landlord's identity. Such an absurd result would fly in the face of the parity of regulation mandated by the Consolidated Omnibus Budget Reconciliation Act of 1993.

Finally, wireless communications service providers do not face the challenges presented when the basic infrastructure is owned by one or two parties. Many entities own communications transmission towers. Broadcast stations, cellular service providers and others own communications transmission towers. The towers are generally available, at negotiated rental rates, to wireless communication service providers. If the Commission determined that wireless communications service providers were eligible for pole attachment privileges from electric utilities, a logical extension of that decision is the inclusion of all communications towers in the pole attachment formula. Congress never intended that all communications tower owners would be included as utilities under Section 224(a)(1) of the Act, just as Congress never intended that wireless communications service providers be granted the benefit of pole attachment privileges.

The wireless communications service community clearly believed it was not included in the pole attachment privileges. None of the trade associations representing the wireless communications service community have appeared in this proceeding. Without comment from the wireless communications service industry, even if the Commission had the authority under the Act to include wireless communications service providers in the pole attachment privileges, it could not. The record on this issue has not been developed.

If the Commission finds AT&T's suggestions appealing, then all poles and towers owned by utilities must be subject to the pole attachment rules. 47 C.F.R. § 1.1403. A utility is defined as a public utility that owns or controls poles for wire communications. 47

U.S.C. § 224(a)(1). A public utility includes electric utilities, providers of natural gas and water, as well as telephone companies and cellular telephone companies. *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket No. 96-98, First Report and Order, 11 FCC Rcd 15499, ¶ 1021 (1996). If the electric utilities are required to make pole attachment privileges available to wireless carriers as providers of telecommunications service, then because cellular carriers, too, are "public utilities" which, in many cases, own or control poles and towers which are used for wire communication,"[27] cellular carriers also must be subjected to the pole attachment rules and required to make their towers available on a non-discriminatory basis to all requesting attachers.

For these reasons, the Electric Utilities object to the suggestions presented by AT&T as inconsistent with Congress' intent, not supported by the record in this proceeding and unnecessary to cure any anti-competitive ill. The Electric Utilities support the comments filed by PNM and EEI/UTC. The Commission should not include wireless communications service providers as eligible for pole attachment privileges. If the Commission does include wireless communications service providers as eligible for pole attachment privileges, then the Electric Utilities request that the Commission make all utilities which own poles or towers, including cellular operators, subject to the pole attachment rules.

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27. Cellular telephone transmission necessarily includes wire transmission. Section 3(51) of the Act, 47 U.S.C. § 3(51), defines "wire communication" as the transmission of signals by aid of wire, cable or like connection between points of origin and reception of such transmission, including all instrumentalities, facilities, apparatus, and services (among other things, the receipt, forwarding, and delivery of communications) incidental to such transmissions. As AT&T states in its Comments, wireless "facilities could be connected to coaxial lines routed vertically on the outside or through the center of the poles . . . " AT&T Comments at 9.

J. Miscellaneous Issues

The Electric Utilities do not argue that third-party attachments cannot be placed on transmission facilities, because, in fact, under appropriate restrictions limited attachments are placed on these facilities. What the Electric Utilities are saying is that a formula driven attachment rate cannot be derived in this rule making, and perhaps ever, due to the unique and varied nature and costs of transmission facilities. The pricing and terms and conditions for attachments to such facilities is probably more properly left to arms-length negotiation in order to account for all of the variables.

The Electric Utilities also endorse the jurisdictional analysis of American Electric Power Service Corp., *et al.*, in their initial comments, and agree that the pole attachment provisions of the 1996 Act were not intended to confer jurisdiction on the Commission to set attachment rates for transmission facilities. The Electric Utilities assert that an adequate record cannot be developed in this proceeding to consider transmission tower attachment rates, and that any such consideration will have to be deferred to a future proceeding.

IX. CONDUIT

Virtually all of the comments filed by cable and communications companies and associations address conduit from the perspective of telecommunications cable systems. The Electric Utilities urge the Commission to recognize that electric underground conduits and ducts are totally different from those used to provide telecommunications services, due primarily to the extremely high voltages and electrical currents in urban-area conduit systems. Accordingly, separate protocols should be established for use of telecommunications conduits systems and for electric conduit systems. The Electric Utilities take no position on rules applicable to telecommunications conduit systems but urge the

Commission to adopt the recommendations Electric Utilities have made in their initial comments for pricing use of electric conduit systems.[28]

X. MISCELLANEOUS ISSUES

A. Overlashing and Other Practices

Contrary to the assertions of some parties, overlashing presents a significant additional burden which consumes additional space on the pole and in the mid span clearance requirements, and causes additional costs to electric utilities. As a consequence, the Electric Utilities believe that they should be permitted to require notification of overlashing, and to charge an additional attachment fee for each overlashing.[29]

The Electric Utilities must be provided with notice regarding each overlash or additional attachment by an attacher after approval for the first attachment is provided. Notice requirements arise from a need to review the engineering and loading on the pole to ensure the integrity of the pole. The weight on the pole of overlashed cable adds strain

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28. For the same reasons cited in the Electric Utilities' discussion of transmission poles, even if the Commission were to order the Electric Utilities to provide access to their conduits, such access could still be denied for valid safety and other concerns.

29. To the extent that any overlashing permits a cable operator to engage in activities in addition to the provision of basic cable services, the Electric Utilities maintain that the facilities which can be used for the provision or transmission of additional services, content or features, should be subject to the higher rates for non-cable attachers -- that is -- they should not be permitted to attach under the basic cable attachment rate. As the 1996 Act creates a distinction between attachments used for basic cable and those used to carry other telecommunications services in the rates that take effect beginning in year 2001, the subject of the FCC's next rule making, the Commission's holding in *Heritage Cablevision Associates of Dallas, et al v. Texas Utilities Electric Company*, File No. PA-89-002, 6 FCC Rcd 7099 (1991) will be effectively overruled.

which can lead to pole failure.[30] In instances in which the overlasher is another party, the electric utilities must also be able to obtain a contract directly with the overlasher to properly address liability, responsibility and other contractual concerns. Permission of one person to attach should not confer the right to "sublet" the space or grant overlashing rights to such third party. Each attachment fee should be for one cable or attachment only.[31]

In further support of its argument that each overlash or attachment should carry a separate charge, the Electric Utilities note that overlashing creates a significant burden, which often must be accommodated by the replacement of poles with those of a larger class in order to provide strength. Without proper notification, the Electric Utilities cannot know which poles need to be re-engineered, and cannot properly assign the costs, make ready or otherwise, to the responsible party.

The Electric Utilities also note that overlashing contributes to additional sag, and often requires the raising of some or all attachments, or increase in pole height, to maintain code or local ordinance roadway and similar clearances.[32] As an example of the additional

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30. The Electric Utilities note that several of its members, including TECO, have experienced increased rates of pole failure due to numerous attachments. During hurricane season the effect of multiple attachments by a party, and the strain of overlashing become apparent. It is very common for poles, under high wind or heavy weather conditions, to fail at the point of the point of the telecommunications carriers' attachments due to the weakness induced from multiple bolts in the pole or overlashed cable weight or wind drag.

31. The FCC has tacitly approved the right of a pole owner to require each third party attacher or overlasher to enter into a separate agreement, and be liable for a separate full attachment charge. *See Marcus Cable Associates v. Texas Utilities Electric Company*, P.A. No. 96-002, Declaratory Ruling and Order, DA 97-1527, released July 21, 1997, where the Commission hinged its opinion on the fact that Marcus was subleasing bandwidth within its attachment, and was not permitting the overlashing of third parties.

32. The position regarding overlashing taken by many of the communications commenters affirms their disregard for the electric utilities' responsibility to maintain a reliable systems through pole integrity and the attendant costs.

sag and bulk caused by overlashing, the Electric Utilities direct the Commission's attention to the attached photographs. *See* Exhibits 2, 4 and 7. Notification is required to ensure that all clearances are maintained.

B. Lightning Protection Provided by Various Facilities

Some of the attaching parties allege that no benefits are derived by them for charges contained in the FERC accounts which are attributable to grounding installations and lighting arrestors. As shown in the initial Comments supplied by the Electric Utilities, both of these facilities provide substantial and necessary protection to all attaching parties from lightning and transient voltage damage.

Regardless of the type of pole used, and the arrangement of the electric utility's lines on the pole, the secondary/neutral and primary lines are both located above any of the attachments of cable and telecommunications attachers. Each of these lines are grounded and bonded to the grounding system of the poles. These grounded lines provide a sixty degree (60°), wedge-shaped cone of protection to the lines under the electric utility lines. This zone of protection provides almost complete protection from lightning strikes, but requires the combined operation of all of the relevant equipment noted in the Electric Utilities' Comments in order to operate properly.

Not only do the lightning arrestor and grounding systems provide this zone of protection in theory, attachers to poles universally bond to these facilities for grounding protection. *See* NESC Rules 223 and 224 at pp. 66-7; Exhibit 11. This bonding is required by the NESC, NESC at 25, Rule 99C, due primarily to the protection that it affords.

The protection provided by electric utility lightning arrestor and grounding systems benefits fiber and wired cables equally. Fiber systems can become cut by hot or charged lines that fall across them, whether due to lightning strikes, tree limbs or other natural

causes. The grounding of these systems and the messengers along which fiber is run help prevent other cables from cutting the fiber, thereby protecting the integrity of the fiber system.

XI. CONCLUSION

In conclusion, the Electric Utilities urge the Commission to properly recognize the differences between the facilities and operations of electric and telephone utilities, and to refrain from adopting a uniform formula to both. Likewise, the Electric Utilities request that the Commission recognize the substantial differences between poles above and below thirty feet tall, and the need to develop two different formulas for these two sets of poles. Failure by the Commission to adopt new pricing rules which reflect not only the differences between electric and telephone utility facilities, as well as the differences between different kinds of electric utility plant, will lead to the establishment of confiscatory rates which will violate statutory and constitutional requirements.

This Reply explains the concept of sag and its effect on the placement of attachments on poles in an attempt to clear up the confusion surrounding this issue. The cable companies should be charged, as usable space, the space required by their attachments, safety spacing and for the considerable additional equipment that they connect to their cables. The subsidy enjoyed by the cable companies should be brought to an end, and the costs for this luxury service should be placed upon cable subscribers, not on the electric utility consumers that rely on electric service for basic lifeline services.

Transmission facilities should not be subject to the pricing and access requirements of this proceeding, as the issues are substantially different than for attachment to poles,a nd an insufficient record will have been developed in this proceeding. Likewise, electric utility facilities should not be mandated for the attachment of wireless facilities. Finally, electric

utilities should be permitted to charge for each overlash or attachment made by a party to a pole attachment agreement.

Respectfully submitted,

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- **ENTERGY GULF STATES, INC.**
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August 11, 1997

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