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BEFORE THE
Federal Communications Commission
WASHINGTON, D.C. 20554

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OCT 21 1997

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)
)
)
Implementation of Section 703(e))
of the Telecommunications Act of 1996)

CS Docket No. 97-151

To: The Commission

REPLY COMMENTS

**AMERICAN ELECTRIC POWER SERVICE
CORPORATION
COMMONWEALTH EDISON COMPANY
DUKE ENERGY CORPORATION
FLORIDA POWER AND LIGHT COMPANY**

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EXECUTIVE SUMMARY

Contrary to many recommendations made by commenters in this proceeding, the Commission authority under § 224 is not plenary. The Commission's authority to regulate pole attachments is limited by the plain language of the statute as well as Congress's intent in enacting the Pole Attachments Act and the 1996 Amendments thereto. Any Commission rules for pole attachments should reflect Congress' strong belief that a deregulated, competitive telecommunications market results in efficiency and innovation and produces the greatest benefits for the American public.

With these principles in mind, contrary to the suggestion of some commenters, section 224(e) anticipates that the parties to a pole attachment agreement have the opportunity to negotiate the rate, terms and conditions for access to the utility pole, duct, conduit or right-of-way. Furthermore, the 1996 Amendments to the Pole Attachments Act make clear that the Commission's authority is limited to regulating pole attachments made by cable operators and telecommunications carriers providing telecommunications services. As such, the FCC cannot classify internet services as cable or telecommunications services. Instead, the FCC must adopt the proposal of the Electric Utilities that facilities used to carry internet traffic are not subject to § 224. If the FCC finds that internet services are subject to § 224, the only permissible interpretation of the Act is that such services are telecommunications services, not cable services.

In addition, some commenters have argued that a cable entity which provides telecommunications services should be entitled to a pole attachment rate that is apportioned between the cable rate and the telecommunications rate based on the number of telecommunications subscribers served by the cable entity. This proposal is contrary to the

statutory language and unworkable. Section 224(d)(3) requires that cable system operators that offer telecommunications services must pay the attachment rate required for telecommunications carriers. Section 224 provides for the cable rate to be applied only to "pure" cable providers. As such, any suggestion that the Commission apportion the pole attachment rate based on the level of telecommunication service provided must be rejected. Moreover, in this regard, the Commission should establish rules which penalize cable entities that mischaracterize the nature of their service offerings.

The Electric Utilities further urge the Commission to adopt rules which recognize their ownership rights in the poles and legitimate safety concerns. Specifically, the FCC must require that all attaching entities enter into a pole attachment agreements with the pole owner prior to placing any attachment on the pole, and that all attaching entities obtain permits and pre-approval before attaching. Equally important, each individual utility should have the right to determine whether to accommodate requests for access to supply space based upon the individual utility's internal engineering and design requirements. The quick and convenient placement of facilities must not take precedent over the safe placement of facilities.

Equally important, common sense and the english language dictate that the concept of pole space embodied in § 224 may be represented by measurements other than linear feet. Safety and reliability concerns dictate that a utility must consider axial, torsional, logitudanal and transverse loading before allowing any entity to attach a wire to its poles. Accordingly, the FCC must adopt rules and regulations in this proceeding that consider a pole's capacity.

Upon review of all the comments filed in this rulemaking, the Electric Utilities continue to believe that utility-determined averages will result in the most accurate determination of the average number of attaching entities. Similarly, the Electric Utilities

urge the FCC to reject the proposals of some commenters that it incorporate occupied space into any rate formula used to allocate the costs associated with unusable space.

The Electric Utilities also agree that the FCC must adopt procedures that bring greater certainty and speed to the negotiation and finalization of pole attachment agreements. In this regard, the Electric Utilities support the proposal to require an attaching entity to provide a utility with 30-days notice of its intent to file a pole attachment complaint. The Electric Utilities further support the suggestion that an attaching entity should be required to certify that all of the issues raised in the complaint were previously discussed with the pole owner before the filing of the complaint, but the parties were unable to reach an agreement.

Finally, the vast majority of commenters in this proceeding agree that the Commission should refrain from any sort of formulaic rate regulation of utility right-of-way. Most commenters believe that because the rights-of-way that utilities own or control vary tremendously depending upon state law and the characteristics of the land, FCC regulation would be impractical, if not impossible. Accordingly, the Electric Utilities respectfully urge the Commission to refrain from any rate regulation of utility right-of-way at this time.

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American Electric Power Service Corporation, Commonwealth Edison Company, Duke Energy Corporation, and Florida Power and Light Company (collectively referred to as the "Electric Utilities"), through their undersigned counsel and pursuant to § 1.415 of the rules and regulations of the Federal Communications Commission (the "Commission" or "FCC"), hereby submit these reply comments regarding the rates to be charged for attachments to their poles, ducts, conduit and rights-of-way. The Electric Utilities participated in the initial stage of this proceeding by filing comments in response to the above-captioned Notice of Proposed Rulemaking.¹

¹ Notice of Proposed Rulemaking, In the Matter of Implementation of Section 703(e) of the Telecommunications Act of 1996, CS Docket No. 97-151 (released Aug. 12, 1997) ("Post-2001 NPRM"). The Electric Utilities also filed comments and reply comments in the FCC's rulemaking involving pre-2001 attachment rates. Notice of

I. All Cable System Operator Attachments Made In A Given Community Must Be Regulated As Telecommunications Carrier Attachments If The Cable System Operator Is Carrying Telecommunications Traffic

Section 224(d)(3) requires that cable system operators that offer telecommunications services pay the attachment rate required for telecommunications carriers.² The statutory language is clear in this regard: "This subsection shall apply to the rate for any pole attachment used by a cable television system solely to provide cable service."³ The instant that any traffic other than "pure" cable service traffic is carried over an attachment, the cable system operator is no longer providing "pure" cable service. If the traffic carried by the cable system operator is telecommunications traffic, then the cable system operator must pay the telecommunications carrier rate as set forth in § 224(e).⁴

Despite the clear statutory language, NCTA suggests that the means for calculating the number of poles for which the cable system operator should pay a telecommunications carrier rate should be based on the number of telecommunications subscribers served. More specifically, NCTA provides the following example: A cable service operator has attachments on 10,000 poles within a community. Five percent of the cable subscribers in this community also receive telecommunications services from the cable system operator.

NCTA, therefore, states that 5%, or 500, of the poles should be assumed to be used for

Proposed Rulemaking, In the Matter of Amendment of Rules and Policies Governing Pole Attachments, CS Docket No. 97-98 (released Mar. 14, 1997) ("Pre-2001 NPRM").

² 47 U.S.C. § 224(d)(3).

³ Id. (emphasis added).

⁴ 47 U.S.C. § 224(d)(3)-(e)

telecommunications, thus the telecommunications carrier rate should be charged for attachments to 500 poles.⁵ Comcast supports this argument by saying that it is an "accident of electron transport" that telecommunications traffic is carried over an entire cable network.⁶ This "accident" supposedly justifies a distinction between how cable company attachments should be treated as compared to those made by telecommunications carriers.

The fact is that most telecommunications networks are designed to carry traffic over a variety of paths so as to ensure efficient call routing. The service provider and customer benefits from this design because information is delivered quickly, reliably and cost-effectively. Indeed, cable system operators need this flexibility to be competitive with other telecommunications carriers, and it is no "accident" that their networks allow for such traffic routing. Cable system operators that are providing telecommunications services are using all of their pole attachments for this purpose because the telecommunications traffic is naturally routed throughout the network. Therefore, all of the attachments of such cable system operators must be treated as telecommunications carrier attachments.

Furthermore, NCTA's proposal must fail because it is contrary to the FCC's policy of relying on publicly available information. Throughout its history of regulating pole attachments, the FCC has relied on publicly available information to calculate attachment rates because it is easy to gather and gives all parties the ability to independently verify the

⁵ Post-2001 Comments of NCTA at 24.

⁶ Post-2001 Comments of Comcast Corporation, et al., at 15.

accuracy of the data.⁷ The same policy argument dictates that the FCC cannot base a rate calculation on representations by cable companies about the nature of their telecommunications services when that information cannot be verified independently.

In fact, the nature of the information that would be required under NCTA's proposal in order to verify the number of telecommunications subscribers tends to be the very type of information that cable companies do not want to supply.⁸ This is because such customer data would be valuable to any potential competitor.⁹ As such, the FCC should not require utilities and other attaching entities to rely on a "pure" cable company to determine the number of poles for which it should pay a telecommunications carrier rate.

As stated by Adelphia Communications, and substantiated by the Electric Utilities in their Post-2001 Comments, cable companies are offering telecommunications services.¹⁰ It is reasonable to expect that such offerings will continue to increase in the future. Therefore, the proposal set forth by the Electric Utilities that all cable system operators are presumed to be telecommunications carriers absent a sworn certificate to the contrary, is the most reasonable approach for resolving how to initially distinguish between "pure" cable system operators and those that have diversified into telecommunications.

⁷ See, e.g., In the Matter of Amendment of Rules and Policies Governing the Attachment of Cable Television Hardware to Utility Poles, 2 FCC Rcd 4387, 4387-88 (Released July 23, 1987).

⁸ See, e.g., In the Matter of Marcus Cable Assoc., L.P. v. Texas Util. Elec. Co., P.A. no. 96-002, ¶¶ 18, 27, 31.

⁹ Id.

¹⁰ Post--2001 Comments of Adelphia Communications, et al., at 1; Post-2001 Comments of AEP, et al., at Section IV.B.

Once a cable system operator begins offering telecommunications services, it is only fair that every attachment within a community and all attachments that interconnect communities for purposes of carrying traffic into and out of the community be charged a telecommunications carrier rate.¹¹ The nature of the traffic carried over an attaching entity's facilities serves as the trigger for determining whether an entity is a "pure" cable service provider or telecommunications carrier. Once this classification is completed, Congress intended that the classification govern the rates paid by an attaching entity for its attachments. Congress did not draw the further distinction that if two types of traffic are carried over the same facility, the attaching entity pays a blended rate. Since Congress did not draw this distinction, the FCC is precluded from promulgating rules that would contradict Congress's intent.

II. The Definition Of "Cable Service" Does Not Encompass Internet Services

As noted by U.S. West, internet services are not telecommunications services.¹² The Electric Utilities agree with this analysis.¹³ Therefore, attachments used to carry such traffic are not subject to § 224(e).¹⁴ The Electric Utilities further refute the claim made by Comcast and NCTA that Congress intended that internet services delivered by cable system

¹¹ As stated by the Electric Utilities in the Post-2001 Comments, a cable system operator may no longer be considered "pure" even when it begins subleasing capacity to carry third-party telecommunications traffic. Post-2001 Comments of AEP, et al., at Section IV.C.

¹² Post-2001 Comments of U.S. West at 4.

¹³ See Post-2001 Comments of AEP, et al., at II.A & C.

¹⁴ Id.

operators be regulated as "pure" cable service.¹⁵ This expansive reading of the 1996 Act is not borne out by the explicit language used in the relevant statutory provisions.

Section 224(d)(3) states:

[Subsection (d)] shall apply to the rate for any pole attachment used by a cable television system solely to provide cable service.... [T]his subsection shall also apply to the rate for any pole attachment used by a cable system or any telecommunications carrier ... to provide any telecommunications service.¹⁶

In order to implement this rule provision, the Commission must review the definitions adopted by Congress for certain relevant terms.

Section 522 defines "cable service" as:

- (A) the one-way transmission to subscribers of (i) video programming, or (ii) other programming service, and
- (B) subscriber interaction, if any, which is required for the selection or use of such video programming or other programming service.¹⁷

NCTA and Comcast argue, through reliance on a congressional conference report, that the words "or use" were added to the definition of "cable service" by Congress in order to demonstrate its intent to include internet service as a "pure" cable service.¹⁸ That this is an incorrect interpretation of the 1996 Act amendments to § 522 is evident from the definition of "video programming" that went unchanged in 1996.

¹⁵ Post-2001 Comments of Comcast Corporation, et al., at 18; Post-2001 Comments of NCTA at n.9.0

¹⁶ 47 U.S.C. § 224(d)(3)(emphasis added).

¹⁷ 47 U.S.C. § 522(6)(emphasis added).

¹⁸ Post-2001 Comments of Comcast Corporation, et al., at 18; Post-2001 Comments of NCTA at n.9.

"Video programming" is defined as "programming provided by, or generally considered comparable to programming provided by, a television broadcast station." When a person accesses information services over the internet, these services are not the same as the "programming" a person would receive simply by turning on a television set. The look, feel, interactive functionality and content of internet services all vary substantially from broadcast programming. By way of analogy, to say that video programming and internet services are alike because parties can receive similar information would be no different than saying that newspapers provide video programming. It is obvious that, by definition, the internet is far more expansive than "video programming." Therefore, the FCC cannot read § 522(6) as referring to internet service.

In light of the above, the FCC must not classify internet services as cable or telecommunications services. Instead, the FCC must adopt the proposal of the Electric Utilities that facilities used to carry internet traffic are not subject to § 224.

Assuming arguendo that the FCC finds that telecommunications carrier and cable system operator attachments used to carry internet traffic are subject to § 224, the FCC must treat internet services as telecommunications services. Cable services have long been understood to be the one-way delivery of video programming. Telecommunications services, on the other hand, have been interpreted historically to include dedicated and switched, one-way and two-way delivery of voice and data communications. As between "pure" cable service and telecommunications service, the nature of internet service is more akin to telecommunications service and should be treated as such for purposes of § 224.

III. Attaching Entities Do Not Have An Unfettered Ability To Attach To Utility Poles, Ducts, Conduit Or Right-Of-Way

Adelphia Communications states that there are no restrictions on the use of space occupied by a given attaching entity.¹⁹ As a result of a similar belief, Comcast argues that attaching entities have the right to overlash without the prior approval of the pole owner.²⁰ These statements reflect a lack of understanding on the part of attaching entities about the nature of pole attachments.

Attachment to utility distribution infrastructure is not, and does not create, a property right. Instead, the Electric Utilities agree with Ameritech that the ability of a cable system operator or telecommunications carrier to attach to poles, ducts, conduit and rights-of-way is a service that is personal to the attaching entity.²¹ Any property rights in the poles, ducts, conduit or right-of-way remain in the utility. As such, an attaching entity does not have the right or ability to make decisions regarding access to, trespass on, or utilization of, a utility's property. The FCC, therefore, must not restrict the ability of utilities to protect their property interests, and the interests of consumers who receive services via all attachments, by allowing the utility to manage the placement of attachments on or in their poles, ducts, conduit and right-of-way.

¹⁹ Post-2001 Comments of Adelphia Communications, et al., at 2.

²⁰ Post-2001 Comments of Comcast Corporation, et al., at 3.

²¹ Post-2001 Comments of Ameritech at 5.

IV. All Attaching Entities Must Enter Into Pole Attachment Agreements As A Condition To Attaching

First, the Electric Utilities agree with Bell Atlantic that the FCC must require that all attaching entities enter into a pole attachment agreement with the pole owner prior to attaching.²² Pole attachment agreements are important because they allow the utility to know who to notify in such cases as an emergency or planned infrastructure modifications. They also ensure that the utility and the attaching entity have a clear understanding of their rights and obligations so long as an attachment exists on the utility's property.

A. Attaching Entities Must Provide The Pole Owner With Prior Notice Of Attachment And Must Secure A Permit Prior To Attaching

Second, the Electric Utilities support the proposals of Ameritech, GTE and other parties that attaching entities be required to provide the pole owner with notice of their desire to attach and to receive pole owner consent prior to placing any pole attachments.²³ The notice should include a description of the nature of the attachment and the proposed attachment arrangement.²⁴ Contrary to the claim of Comcast,²⁵ prior notice and consent is necessary to ensure that the attachment can be made without damaging the pole or other attacher's facilities and without service disruption.

²² Post-2001 Comments of Bell Atlantic at 2.

²³ See, e.g., Post-2001 Comments of Ameritech at 5; Post-2001 Comments of GTE at 7; Post-2001 Comments of ICG at 23; Post-2001 Comments of USTA at 6.

²⁴ Post-2001 Comments of Bell Atlantic at 2.

²⁵ Post-2001 Comments of Comcast Corporation, et al., at 3 (stating that permitting is not necessary because "there is no legitimate engineering or administrative need to do so.").

First, Congress intended that the FCC find that permitting and prior approval is justified when an attaching entity is seeking access to electric utility poles, ducts, conduit and rights-of-way. Section 224(f)(2) explicitly states that electric utilities may deny access on the basis of "insufficient capacity and for reasons of safety, reliability and generally applicable engineering purposes."²⁶ This statutory provision would be rendered meaningless if the FCC does not give electric utilities a meaningful opportunity to review a request for access prior to an attachment being made. In fact, anything other than prior review could lead to the safety problems that Congress sought to avoid when it added § 224(f).

For the reasons stated by the Electric Utilities in their comments filed in the Local Competition proceeding, the Pre-2001 Rate Rulemaking and this current rulemaking, attaching entities cannot be allowed to attach their facilities "at their option." ICG suggests that attaching entities need the ability to attach to poles in a short timeframe.²⁷ With this in mind, ICG makes two proposals. First, ICG suggests that attaching entities be allowed, at their option, to place their facilities on poles while an attachment agreement is being negotiated. If the rates, terms and conditions are not agreed upon in one year and a complaint is not filed, then the attaching entity must accept the lowest rate offered by the utility.²⁸ Second, ICG proposes that attaching entities be allowed, on their own, to assess

²⁶ 47 U.S.C § 224(f)(2).

²⁷ Post-2001 Comments of ICG at 15.

²⁸ Id.

the amount of space available on a pole, perform the necessary make-ready work, place the attachment and then notify the utility of what it has done.²⁹

The Electric Utilities appreciate the desire of attaching entities to place their facilities on poles as soon as possible. However, the quick placement of facilities must not take precedent over the safe placement of facilities. Utilities must have the ability to control access to, and the use of, their poles, ducts, conduit and right-of-way to ensure the efficient and safe use of these resources. The FCC, therefore, must reject the claims of ICG and others that permitting and pre-approval are not necessary.

B. Utilities And Attaching Entities Must Have The Ability To Recover Fees And Costs From Cable System Operators That Mischaracterize The Nature Of Their Service Offerings

Third, the Electric Utilities have proposed that cable system operators must provide a sworn certificate to a utility and the FCC if it is claiming that it is a "pure" cable system operator subject to a lower attachment rate.³⁰ The Electric Utilities agree with Bell Atlantic that the certification requirement must be augmented to include a penalty that would be assessed against entities that mischaracterize their service offerings. More specifically, Bell Atlantic suggests that cable operators should be required to pay the utility a retroactive attachment rate, with interest.³¹ Bell Atlantic's proposal allows a utility to recover from the attaching entity the lost fees to which it is entitled. The Electric Utilities believe fee recovery is the minimal solution for such actions on the part of cable system operators. In

²⁹ Post-2001 Comments of ICG at 25.

³⁰ Post-2001 Comments of AEP, et al., at Section IV.C.

³¹ Post-2001 Comments of Bell Atlantic at 4.

addition, the FCC should allow a utility or an attaching entity³² that files a pole attachment complaint against a "pure" cable company to recover all costs, attorney fees and other administrative expenses incurred to investigate and file such a complaint in instances where the "pure" cable company has mischaracterized its traffic in a sworn certificate. The FCC's adoption of these proposals will deter "pure" cable companies from abusing the distinction between the attachment rates to be paid by them versus telecommunications carriers.

V. The FCC Should Not Mandate That Attachments Must Be Allowed In Electric Utility Supply Space

ICG submits that electric utilities are placing telecommunications attachments in their supply space.³³ As a result, ICG asks that the FCC mandate that an electric utility must grant requests made by attaching entities that involve the use of supply space. The Electric Utilities urge the Commission to reject ICG's proposal. Instead, the FCC must follow the statutory prescription of § 224(f)(2) and allow a utility to decide whether to accommodate such requests based upon the individual utility's internal engineering and design requirements.

The Electric Utilities believe that mandating access to supply space would be extremely unsafe and impractical. For example, most electric utilities, based on their review of the NESC and their own internal design, engineering and construction standards, have chosen not to permit other parties to install their facilities in the supply space. Many utility's

³² See discussion infra at Section XI.

³³ Post-2001 Comments of ICG at 41.

base this decision on their inability to distinguish between dielectric and metallic cable³⁴ after installation and the possibility that the attaching party may, without the utility's knowledge, employ installers who lack the training and certification necessary to work in the electric supply space. By mandating access to the supply space, the FCC would be creating precedent that could pose a serious threat to public safety and service reliability.

In addition, the supply space has been allocated to electric utilities for their core business use. The electric utilities require this space to accommodate current and future demand for electricity. In fact, some parties argued in the first rulemaking that electric utility pole height is increasing due to consumer demand for electricity.³⁵ Contrary to this unsubstantiated claim, the size of the electric utility supply space has largely remained constant, largely because the amount of space allocated to the electric utility already takes into account current and future core business demand. Therefore, the space that an electric utility requires on a pole need not be expanded absent some extraordinary event. ICG's proposal that the FCC mandate attaching entity access to supply space, however, could jeopardize the ability of an electric utility to meet the demands of its core business. The myth that pole height is increasing due to an increase in demand for electricity could become a reality.

³⁴ Some utilities may allow installation of dielectric fiber optic cable in their supply space, but the NESC does not permit installation by others of metallic cable, such as coaxial cable, twisted copper cable or fiber optic cable containing a metallic cover or messenger.

³⁵ Pre-2001 Comments of NCTA at 9.

Thus, to the extent that some individual electric utilities choose to allow parties into their supply space, they do so based on their own design, engineering and business procedures.³⁶ More specifically, the utility must assess such factors as its own core business demands, the engineering and design for the attachments already on the pole, the specifications of the attaching entity's request, personnel expertise, and general issues of public safety. Based on these and other factors, some utilities are able to allow attaching entities to use their supply space; others cannot. The FCC should not allow these few instances to serve as the basis for requiring all electric utilities to follow a similar practice.

³⁶ ICG claims that the electric utility industry has allowed telecommunications facilities to be placed in their supply space. Post-2001 Comments of ICG at 41. The Electric Utilities wish to point out that they may place non-current carrying facilities in their supply space as part of their core business. Supervisory Control and Data Acquisition ("SCADA") systems are a common telecommunications-based application used by the electric utility industry to manage the flow of electricity over conductors. This service is essential for allowing the electric utility to avoid power surges, overheating and other problems that can have catastrophic results if not identified and corrected in a timely fashion. That an individual utility may use fiber optic cable to provide this service does not mean that the utility has made its supply space available for telecommunications services. The Electric Utilities do not place telecommunications facilities owned by their telecommunications affiliates in the supply space. Instead, the affiliates are made to attach in the usable space area available to other telecommunications and cable service providers and are made to pay a market rate for such attachments. For example, contrary to ICG's belief, Duke Power requires its telecommunications affiliate, DukeNet, to attach in the communications space or, in some cases, to lease dark fiber. In either case, the pole rental rate is commensurate with the rate charged to other telecommunications carriers.

VI. Pole Capacity Must Be A Guiding Factor In Any FCC Pole-Related Regulation Of Overlapping

Parties to this proceeding have stated that the FCC should not consider pole capacity when implementing regulations related to the rates, terms and conditions governing access to poles. The basis for these claims include that the overlashed facility is very light³⁷ or that § 224 is written in terms of space.³⁸ The fallacy of these arguments rests on two points.

First, parties are taking too narrow a view of what constitutes "space." Common sense and the English language dictate that space is represented by measurements other than linear feet.³⁹ For example, space can be measured in terms of size, capacity or strength. Thus, a container may be one square foot or it may be said to hold 10 gallons or 20 pounds. Each of these are equally valid ways of measuring the space associated with the container. The same is true of a pole, duct or conduit. Therefore, the Commission is not precluded by the Pole Attachments Act from construing the term "space" to mean or include capacity.

In addition, it is clear that capacity does not have to be integrated into any formula in order for it to be relevant in this and other pole-related rulemakings. The fact that pole

³⁷ See, e.g., Post-2001 Comments of AT&T at 6-7; Post-2001 Comments of NCTA at n.7.

³⁸ Post-2001 Comments of NCTA at 15. It is noteworthy that, in every instance where parties reject capacity considerations, there is no mention of, or rebuttal to, the detailed engineering arguments presented by the Electric Utilities or Duquesne Light & Power. in the Pre-2001 Rate Rulemaking and the Local Competition Proceeding. This is because the engineering justifications for considering capacity are unassailable.

³⁹ The term "space" is very broadly defined in an average dictionary and includes at least twelve different contexts in which the word can be used. Webster's Third New International Dictionary, at 2180 (1993 Ed. unabridged). Capacity is one such way to define space. Id. at 330 (defining "capacity" as "an empty space" or "a containing space").

attachments physically impact the ability of a pole to remain standing and bear weight dictates that this engineering principal serve as an underpinning to any pole attachment rules promulgated by the FCC if the rules are to be fair to all entities affected by § 224.

A. The Weight Of An Overlashed Attachment Must Be Considered By A Utility Prior To Placing The Attachment

When reviewing the impact of a given pole attachment, a utility must consider four stress factors. The first is axial loading, which is a function of the actual weight of the facilities attached to a pole. When AT&T and MCI state that overlashed fiber is much lighter than attachments already on utility poles, they are referring to axial loading. In this context, it is true that today's telecommunications technology is allowing telecommunications carriers and cable service providers to carry more traffic over smaller facilities. However, such new facilities still have weight.⁴⁰ Each time a facility is placed on the pole, either directly or through overlashing, it increases the weight the pole is made to bear.

Second, the utility must consider torsional loading. Torsional loading considers the stress that can be placed on a pole when cantilevered arms and brackets are made to twist the pole when uneven loads from the cable pull the cantilevered arm. This can be caused by the weight of the cable or ice, or often it is caused by wind loading. Even a light, fiber optic cable can damage a pole in instances where the pole is caused to twist.

⁴⁰ It should be noted that the weight of the facility increases with rain and ice accumulation. Therefore, it is not enough to consider the weight of the wire facility in ideal weather conditions. The NESC requires that facilities are designed to withstand these conditions. The NESC provides the necessary design criteria. For example, by attaching a 20 pound fiber cable as an overlash to a pole (200 foot span) in Washington, D.C., the pole must be capable of withstanding the 20 pounds of cable — the weight of the cable — and 220 pounds of ice.

Third, the utility must consider longitudinal loading. The ability of a pole to bear a wireline facility is affected by uneven forces applied to it. This is most often seen when the: 1) grade of construction differs (i.e. highway crossings); 2) the span lengths from pole to pole differ, or 3) service at service drop locations is not balanced on the opposite side of the pole with another service or down guy.

All three loading factors described above must be considered by the pole owner prior to allowing any entity to attach wire onto its poles. These factors are important regardless of whether the facility is attached directly to the pole or overlashed because they all determine whether the pole can withstand the addition of more weight. Thus, AT&T and others are wrong when they argue that the Commission need not be concerned about their light-weight facilities. The integrity of the pole and the uninterrupted delivery of services over existing attachments both depend on the utility having the ability to test a pole prior to a new facility being attached.

B. Transverse Loading Must Also Be Considered Prior To Attachment

Independent of these weight-related factors, the utility must also be concerned about wind. The bending-moment stress that is created on a pole when wind blows on wires is considered by a utility under the fourth loading concept — transverse loading. Transverse loading is commonly the most critical stress applied to a pole and is completely independent of the weight of the facility. The NESC requires that the pole be designed to withstand a wind load criteria of four pounds per square foot in the northern section of the United States and nine pounds per square foot in the southern portion of the United States.⁴¹ As was

⁴¹ 1997 NESC Rule 250.

discussed in detail in the comments filed by the Electric Utilities in the Pre-2001 Rate Rulemaking, wire attachments are wind resistors.⁴² ICG also affirms that overlashing takes up pole capacity, with overlashed cable "often [having] a greater affect on wind loading than the installation of separate cable."⁴³

The amount of wind a facility resists is a function of the cross sectional area of a cable that is exposed to the wind. Thus, an overlashed cable will have a larger cross sectional area than a single cable. The cross sectional area is increased by water and ice that can accumulate, thus increasing the transverse loading that a utility must consider when determining whether a pole can accommodate an additional attachment.

C. Just, Reasonable And Nondiscriminatory Pole Attachment Regulations Must Include Considerations Of Pole Capacity

AT&T argues that the smaller facilities used today create only a marginal increase in stress on a pole compared to other attachments.⁴⁴ The emphasis of AT&T's argument is on the word "compared." This is misplaced. The fact is that any increase in stress is relevant for purposes of maintaining the subtle balance of all attachments on a pole.

AT&T further argues that utilities will rely on capacity as means for denying access.⁴⁵ Section 224 already allows utilities to deny access or to require make-ready work when a pole cannot accommodate an additional attachment. The real issues are twofold.

⁴² Pre-2001 Comments of AEP, et al., at Section VIII.H.

⁴³ Post-2001 Comments of ICG at 20.

⁴⁴ Post-2001 Comments of AT&T at 7.

⁴⁵ Post-2001 Comments of AT&T at 8.

First, will the FCC mandate that all entities notify the pole owner prior to placing anything on a pole so that the utility can ensure that its conductors and the attachments of other parties are not displaced by unauthorized attachers? Second, is the FCC willing to allow current attachers to have the benefit of expanding their capacity at no charge at the expense of those not already on the pole?

For example, some commenters argue that current attachees are free to overlash at will and should not be required to pay for overlashed attachments because the space they occupy is already paid for through the rate charged for the original attachment.⁴⁶ It is true that the overlashed facility occupies no additional vertical space on the pole.⁴⁷ However, that same attachment is using space in the sense that some percentage of the pole is no longer available because a percentage of pole capacity has been used. If the FCC wished to translate this concept to space, it easily could.⁴⁸ But this step is not necessary in order for the FCC to integrate capacity into its pole attachment regulations. As explained in their comments, the Electric Utilities believe that fairness dictates that attaching entities

⁴⁶ See, e.g., Post-2001 Comments of Bell Atlantic at 5.

⁴⁷ This does not mean that vertical clearance at mid-span does not change as a result of overlashing. The opposite is usually the case.

⁴⁸ For example, if the overlashed facility took up ten percent of the pole's capacity, this could be translated to vertical space by simply taking ten percent of the pole's usable space (e.g. 16.2") and attributing it to the overlashed attachment. This is reasonable because, in fact, even if one foot of space was available, nothing could be attached in that space because the pole would come down.