conduit rate formulas to reflect these changes by adopting a Forward-Looking Economic Cost Pricing Model for both poles and conduit.

74. The current pole attachment rate formula used by the Commission is:

$$\text{Maximum Rate} = \frac{\text{Space Occupied by Attacher}}{\text{Total Usable Space}} \times \text{Net Cost of Bare Pole} \times \text{Carrying Charges}$$

The proposed conduit attachment rate formula is:

$$\text{Maximum Rate} = \frac{\text{Space Occupied by Attacher}}{\text{Total Usable Space}} \times \text{Net Conduit Cost Per Meter} \times \text{Carrying Charges}$$

The Electric Utilities propose that these formulas be updated with a Forward-Looking Economic Cost Pricing Model.

75. Ideally, the price a third-party pays to access a utility's poles and conduit systems should be the market rate established through arms-length negotiations between parties. However, the Electric Utilities understand that pre-2001, the Commission arguably has less flexibility to rely solely on market-based rates. However, it is completely within the Commission's discretion to apply an up-to-date methodology in § 224(d)(1) using forward-looking economic costs, not embedded costs.[105] The use of forward-looking economic costs, in lieu of historical costs, would result in the most equitable allocation of costs across all parties benefitting from attachments to a pole or conduit system. Such an approach is also consistent with Commission policy in implementing the 1996 Act. Finally, this solution is also just and reasonable because the

---

[105] Id.

attachers are using a utility's asset to generate profits and thus their attachments to poles should not be subsidized by an unreasonably low regulated rate.[106]

76. In adopting forward-looking economic costs, the Commission is not burdened with implementing a completely new pricing formula. Two changes would be necessary, however. Embedded historical costs would be replaced with forward-looking economic costs and the carrying charge component would be annualized or "levelized." The pricing formula needed to reflect forward-looking economic costs is as follows:

$$\text{Max. Rate} = \frac{\text{Space Occupied}}{\text{Total Usable Space}} \times \text{Forward-Looking Economic Cost of a Pole/Conduit System} \times \text{Carrying Charges}$$

where,

$$\text{Forward-Looking Economic Cost of a Pole/Conduit System} = \text{Gross Pole/Conduit System Investment}$$

77. While the formula itself does not change, the value of some of the accounts included in the formula will necessarily change with the adoption of forward-looking economic costs. Specifically, the gross pole and conduit system investment will change. The gross pole and conduit system investment accounts will reflect the replacement costs of poles or conduit systems at current prices, rather than the historical book value of such assets.

78. Carrying charges would be developed on an annualized or "levelized" basis. A levelized charge does not rely on net depreciated plant investment values to determine

---

[106] Attaching entities must pay fair market rates for labor, office space, telephone bandwidth and other resources important to their business. So long as viable substitutes exist for delivering telecommunications and cable services, there is no justification for subsidizing the attaching entity's access to one delivery method, such as poles and conduit.

the revenue requirements of a pole or conduit system. Instead, the carrying charges are applied to the replacement cost of the investment.

79. The application of levelized carrying charges is used throughout the electric utility industry. The process of levelizing converts a series of non-uniform amounts into a series of equivalent uniform amounts. The levelized amount is financially equivalent to the series of unequal amounts because, at a specific discount rate, they have the same present value. A levelized approach negates the necessity of constantly updating the formula for annual changes in depreciation amounts, taxes, and return on net investment to ensure complete cost recovery. It is important to understand that over the life of the investment, the cost recovery would be equivalent.

VIII. The Pole Attachment Rate Methodology

A. A Forward-Looking Economic Cost Pricing Model For Poles

80. In the context of distribution poles, the Commission is able to adopt a forward-looking economic cost approach in its pole attachment rate formula with only minor modifications to its current pole formula. The gross pole investment must reflect the replacement cost of poles, including labor and other costs, at current prices rather than the historical book value of the poles.

81. The Commission can use cost studies to establish rates based on assumptions about the average poles deployed and the labor and other costs associated with placing a pole. The cost study can be based on rates for the United States, for a state or for a given utility.

B. The Current Pole Attachment Formula Must Be Modified Regardless Of Whether The Commission Adopts The Forward-Looking Economic Cost Pricing Model

82. Regardless of whether the Commission adopts the Forward-Looking Economic Cost Pricing Model discussed above, the Commission must update its existing pole attachment rate formula to take into account the prevailing practices in the industry and to improve its accuracy.[107] These updates include:

- Alternatively, modifying usable space on a pole to 11 feet.
  - Adopting an average pole height of 40 feet.
  - Allocating the 40-inch safety space to nonusable space.
  - Raising the lowest point of attachment to 19'8".
- Excluding 30-foot and smaller poles from the calculation of the net cost of a bare pole.
- Adopting a separate formula for attachments to 30-foot poles.
- Expanding the FERC Accounts[108] to be included in the rate formula.
  - Adding portions of Accounts 365 and 368 in the cost of a bare pole.
  - Including a general plant component to the net cost of a bare pole.
  - Including operation expenses in the maintenance carrying charge calculation.
  - Establishing a fallback source for the cost of capital.

Implementation of these changes will result in a more accurate pole attachment formula, consistent with the goals of the agency's NPRM.[109]

---

[107] NPRM ¶ 1.

[108] The Electric Utilities wish to make the FCC aware that any position it takes in this rulemaking regarding the reliance on FERC accounts for purposes of calculating pole attachment rates could become moot by virtue of activities currently pending at FERC. Both FERC and the electric utilities have acknowledged that the current accounting methods place a significant cost burden on the electric utilities without providing any significant corresponding benefits. As a result, it is predicted that the current accounting method will be eliminated within the next five years.

[109] 47 U.S.C. § 224(b)(1).

C. The FCC Must Amend The Average Usable Space Available On A Pole To Reflect Current Industry Practices

83. The Electric Utilities urge the Commission to adopt the changes proposed below regarding the amount of usable space available on an average 40-foot pole. The first calculation in the current pole attachment formula is aimed at determining the percentage of usable space occupied by a given attacher on an average pole. In order to derive this percentage, the utility must know the amount of space occupied by the attacher and the total amount of usable space on a pole. Both of these factors have been historically based on several assumptions about the height of a pole, the amount of space that certain types of attachments require and the amount of space required between attachments. These assumptions were largely expressed in terms of averages. The current allocation of space used by the Commission in its pole rate formula is based on an average pole of 37'6" of which 24 feet, including the 6 feet below ground, is considered to be nonusable space and 13'6" is usable space.[110]

84. The Electric Utilities encourage the Commission to continue the practice of permitting pole attachment rate calculations to be based on averages. However, since the enactment of the 1978 statute, the proliferation of attachments and the prevailing practices in the telecommunications, cable and electric industries have changed. Accordingly, the Commission should now assume the average usable space on a pole to

---

[110] For example, when the Commission initially implemented the pole attachment rate formula, it invited comments on the amount of usable space for various size poles in different service areas. Second Report and Order, 72 FCC 2d at 68. From these comments, the Commission found that "the most commonly used poles are 35 and 40 feet high, with usable spaces of 11 and 16 feet, respectively." Id. at 69.

be 11 feet to reflect current industry practices. This adjustment is warranted because the other inter-related space allocations on a pole have changed. More specifically, the average height of a pole has increased to 40 feet, the point of attachment on a pole for the lowest attacher must be changed to 19'8" and the 40-inch safety space must be allocated to nonusable space.[111/] The revised averages proposed herein by the Electric Utilities must be adopted by the Commission to more accurately reflect the actual use of pole space by attachers and to ensure a more equitable sharing of the costs associated with providing and maintaining the utility infrastructure to which access is sought.

1. The Average Height Of A Pole Has Increased

85. The Commission must increase its assumption for the average height of a pole from 37'6" to 40 feet. The original average of 37'6" was adopted because, at the time, the population of poles to which attachments were being made included a significant number of 35 and 40-foot poles. The Commission, therefore, adopted the average of these two heights. Over time, to accommodate the growing demand for access to poles by cable operators and others and to reduce the frequency of premature retirement of 35-foot poles, 35-foot poles have been replaced with 40-foot and taller poles. In trying to accommodate the needs of attachers, however, utilities are limited in their options because poles are available only in 5-foot increments. Because the NESC requires ground clearance of 15'6" under fully loaded conditions for wires suspended

---

111/ See Exhibit 2 for a general depiction of the proposed allocation of required, usable and nonusable space on an average 40-foot pole.

from poles,[112] cable sag and other concerns make it impossible to meet the space allocations for electric, telephone, cable and any other attacher on any pole less than 40 feet.[113] In order to accommodate even one cable attachment, in addition to telephone and electric utility attachments, while also meeting NESC ground clearance requirements, a pole must be at least 40 feet tall.[114] Although 45-foot and taller poles are in service and are being used by telecommunications carriers and cable operators for attachments, on average, 40-foot poles bear the majority of attachments by cable and other attachees.

2. The Amount Of Usable Space On A Pole Must Be Adjusted To Reflect Changes To The Allocation Of Nonusable Space

86. The amount of usable space on a 40-foot pole must be changed to 11 feet. The FCC's current rules assume an average amount of usable space of 13'6" and an average nonusable space amount of 24 feet based on a hypothetical pole of 37'6"[115]

a. The Lowest Attachment On A Pole Must Be Made At 19'8" In Order To Meet Ground Clearance Standards

87. In order to achieve 15'6" of ground clearance under fully loaded conditions as required by NESC, the lowest attachment on a pole must be at least 19'8" from the

---

112/ 1997 NESC, Rule 232.

113/ The Electric Utilities respectfully remind the Commission that the 37'6" pole is a hypothetical model. While space for attachers might theoretically be available on a 37'6" pole, in reality, a utility must choose to set a 35 or 40-foot pole.

114/ Were it not for the presence of cable attachers, an electric utility would be able to meet its own needs using 30 to 35-foot poles.

115/ See Exhibit 3 for a detailed depiction of the Commission's current space allocation on a 37'6" pole.

ground in order to accommodate communications cable sag.[116] The Electric Utilities urge the Commission to recognize the actual specifications that the attacher and utility are required to meet in order to comply with the NESC safety standards and thus to adopt a minimum ground clearance of 19'8" at the point of attachment on the pole.[117]

116/ The Commission must understand that cables are subject to changes in sag. For example, ice loading, wind pressure and temperature changes can cause permanent increases in the amount of sag suffered by a cable. See NESC Handbook at 195. As a result, it is critical that communications and cable facilities be attached at 19'8" to ensure that the initial sag and future sag do not cause an improper ground clearance level that would result in an attachment potentially causing safety problems to the general public.

In addition, the fact that a cable or communications company can pull its cable tight so as to avoid large amounts of sag does not lead to a resolution of all NESC compliance issues. All cables attached above such communications or cable attachments depend on a certain degree of sag from the lower attachment in order to meet the NESC clearance requirements between horizontal cable attachments. 1997 NESC Rule 235. Cables pulled tight can actually cause poles to move, thus affecting wires several spans away.

117/ The following table illustrates how mid-span sag can be determined for a typical communications cable:

Distance Between Poles (Feet)

Cable Type	150 ft	200 ft	250 ft	300 ft
100 Pair	20" sag	32" sag	45" sag	60" sag
200 Pair	24" sag	37" sag	53" sag	72" sag
300 Pair	30" sag	45" sag	63" sag	83" sag

Cable and telecommunications entities will likely coexist on the same pole. With this in mind, the minimum pole attachment height will be driven by the cable with the largest sag. This will normally be the telecommunications cable. Taking into account the distances between poles, to comply with the NESC requirement of a 15'6" mid-span clearance, the communications facility must be attached at 19'6" to accommodate the average sag of 50 inches.

(1) The 40-Inch Safety Space Must Be Allocated To Nonusable Space

88. With respect to the 40-inch clearance, or safety space, between electric conductors and communications cables required by the NESC, the Electric Utilities urge the Commission to allocate this space on the pole to nonusable space. Such an allocation is consistent with Congress's intent and it is within the discretion of the Commission to make such a modification to the pole attachment formula.

89. The Commission has determined previously that the 40-inch space should not be included in the usable space allocated to non-electric utility attachers. [118] Instead, the FCC has allocated the 40-inch safety space to the electric utility as part of its usable space because of its belief that the safety space emanates from the utility's requirement to comply with the NESC. This belief is misplaced and must be corrected.

90. The 40-inch safety space is designed to protect the employees of communications companies from coming into physical contact with the potentially fatal voltage carried by the electric lines. [119] NESC requires such compliance because of the presence of communications facilities. [120] Were it not for the presence of communications facilities, the 40-inch safety space would not be required and electric utilities could be in the 40-inch space attaching their own high voltage wires.

---

[118] Second Report and Order, 72 FCC 2d at 70-71.

[119] NESC Handbook at 308.

[120] Id. The Commission itself has previously held that the risk for maintaining this safety space effectively falls on the cable operator. Second Report and Order, 72 FCC 2d at 70-71.

91. The existence of the safety space is also dictated by the United States Department of Labor, Occupational Safety & Health Administration ("OSHA") standards. Under the installation safety provisions, OSHA requires that the dimension of working space around electrical wires be between three and four feet depending on the nominal voltage to ground.[121] The standards and regulations stipulated by OSHA recognize the NESC as the safety standard for both the telecommunications and electric industries.[122] In this context, the OSHA standard applicable to telecommunications goes on to state that the employer must ensure that none of its employees approach exposed energized power lines and parts.[123] This further clarifies that the safety space exists for the benefit of communications attachers. Were it not for the existence of such attachers, the electric utilities could meet the NESC and OSHA standards for their own employees and still only require a 30-foot pole to support its conductors. There would be no need to leave 40 inches of valuable pole space free of attachments.

92. Examination of § 224(d)(1) is instructive in determining what Congress intended with respect to the allocation of distribution pole space. It provides that a utility is entitled to recover certain costs, up to a maximum of actual costs, associated with a percentage of the "total usable space" on the utility's distribution poles. The term "usable space" is defined in § 224(d)(2) as "the space above the minimum grade level which can be used for the attachment of wires, cables and associated equipment."

121/ OSHA Standard, 29 C.F.R. § 1926.403.

122/ OSHA Standard, 29 C.F.R. § 1910.269(t)(8).

123/ OSHA Standard on telecommunications, 29 C.F.R. § 1910.268(b)(7). This rule provision applies to the telecommunications attacher as an employer.

(emphasis added).[124] For example, communications and cable companies use associated equipment such as bolts or J hooks in order to physically attach their communications cable to a pole. This definition is unchanged from the 1978 Pole Attachments Act. For the rate formula of § 224(d)(1) to have any meaning, therefore, the pole attachment must be a wire facility and usable space must be space in which such wires can be attached. Flowing from this, it necessarily follows that all space to which wires cannot be attached must be nonusable space. As the NESC and OSHA standards preclude attachment of wires in the 40-inch safety space, this space should be classified as nonusable.

93. Furthermore, Congress established that the FCC's jurisdiction under § 224 is triggered only where communications space for wire communications has been established on the utility infrastructure:

> Federal involvement in pole attachment matters will occur only where space on a utility pole has been designated and is actually being used for communications services by wire or cable.[125]

94. This interpretation is further supported in the definition of "utility." There, Congress stated that application of the Pole Attachments Act is limited to a utility whose infrastructure is being "used, in whole or in part, for any wire communications."[126] The Commission's jurisdiction thus exists only where a utility has established a "communications space" for wire communications on its poles. Thus, the

---

[124] 47 U.S.C. § 224(d)(2).

[125] S. Rep. No. 580 at 15 (emphasis added).

[126] 47 U.S.C. § 224(a)(1).

fact that any or all attachers have non-wire equipment in the 40-inch safety space is irrelevant under the Pole Attachments Act.[127]

95. The Electric Utilities believe that this safety space must be classified as nonusable space. As a result of the revisions to § 224 that occurred as part of the 1996 Act, utilities will be required to apportion the costs associated with the nonusable space to all attachers.[128] Allocating the 40-inch safety space to nonusable space will ensure that all attachers bear some portion of the cost once the 1996 Act's amendments to the Pole Attachments Act become effective on February 8, 2001.[129] For purposes of consistency, the Electric Utilities recommend that the Commission make this allocation now rather than adopt one allocation for the pre-2001 formula and a second allocation for the post-2001 formula.

96. Based on the information presented above, the usable space presumption should be changed from 13'6" to 11 feet. Assuming a new average pole height of 40 feet,

---

[127] It has been suggested that the Electric Utilities are making use of the 40 inch space by making non-wire attachments and, therefore, that it is reasonable that the FCC allocate this space to the electric utilities. This justification fails for two reasons. First, it is evident from the discussion herein that Congress was not concerned with non-wire attachments to poles when it originally enacted, and later modified, the Pole Attachments Act. Second, electric utilities may place streetlights in the 40 inch space. However, the Commission must understand that such equipment is placed on the pole at the request of municipalities for public safety reasons. To project a proper light pattern, the street lights must be a specific distance from the ground. This distance varies depending on the type of light used, the pattern desired, etc. The electric utility in most cases receives no money for the placement of the equipment on the pole, and the equipment is not associated with electricity distribution. In addition, this equipment is placed on only 20% of all electric utility poles.

[128] 47 U.S.C. § 224(e)(2).

[129] Id. § 224(e)(4).

at a minimum, the Electric Utilities urge the Commission to allocate space on a pole as follows:

(1) The total amount of usable space is 11 feet that is allocated to electric facilities occupying 7'6",cable facilities occupying 1 foot, and the LEC facilities occupying 2'6".[130]

(2) The average amount of nonusable space is 29 feet comprised of 6 feet below ground,[131] 19'8" of minimum ground clearance and 40 inches of clearance between the electric and communications space.

The proposed allocation reflects the proper distribution of space on a pole as dictated largely by the NESC.[132]

3. The Commission Must Modify The Formula For Calculating The Net Cost Of A Bare Pole

97. Assuming arguendo that the Commission does not adopt the forward-looking economic cost model for calculating the current cost of a pole, the Commission must modify the means by which it calculates the cost of a pole based on historic costs.

98. Under the Commission's current rate formula, the calculation of the net cost of a bare pole is as follows:

130/ The Commission has assumed that cable operators occupy one foot of usable space on the pole. See Second Report and Order, 72 FCC 2d at 70. On average, electric facilities occupy between 7-8 feet of usable space and LEC facilities occupy between 2-3 feet of usable space. The Electric Utilities have averaged the amount of space occupied by each to arrive at an assignment of 7'6" of usable space for electric and 2'6" of usable space for LEC facilities.

131/ The Commission has recognized that 6 feet of pole space underground is standard. Second Report and Order, 72 FCC 2d at 68 n.21 (discussing a 35-foot pole). The Electric Utilities believe that the amount of space below ground is not an issue, although for some electric utilities the standard below grade depth for a 40-foot pole is 6'6".

132/ See Exhibit 4 for a detailed depiction of the proposed space allocation for a 40 foot pole.

$$\frac{\text{A/C 364 (Gross Pole Investment) - Depreciation Reserve (Poles) - Accumulated Deferred Income Taxes (Poles)}^{133/} \times .85 \text{ of Net Pole Investment}}{\text{Number of Poles}}$$

The Electric Utilities urge the Commission to modify the formula for calculating the net cost of a bare pole by eliminating 30-foot poles.

a. Thirty Foot Poles Must Be Excluded From The Pole Attachment Rate Formula Or The Usable Space Allocation On All Poles Must Be Changed

99. The Commission includes distribution poles of all heights in its current pole attachment rate calculation.[134/] The Electric Utilities propose that 30-foot poles should be eliminated from the investment in Account 364, and from the total number of poles, to arrive at a more accurate accounting of the actual net costs of a bare pole and a more precise count of the actual number of poles suitable for joint use. The Electric Utilities propose that these poles should not be included in the calculation of the cost of a bare pole because where such poles are used jointly, they are service-type attachments and space allocations are dramatically different on a service pole.[135/]

100. To the extent that electric utilities cannot account for their 30-foot poles separately, it is fair to disregard shorter poles in the general pole attachment rate

---

133/ In this calculation of the net cost of a bare pole, deferred taxes are treated in the same manner used by some state commissions – as a rate base deduction. If the state utility commission includes the reserve for deferred income taxes in the utility's capital structure at zero cost, this adjustment to A/C 364 would not be necessary.

134/ NPRM ¶ 20.

135/ See Exhibit 5 for a detailed depiction of the space allocation proposed by the Electric Utilities for 30-foot service poles.

formula because the FCC also disregards taller poles in making its pole height assumptions. Furthermore, because there are very few 30-foot joint use poles deployed today by electric utilities, they would not be excluding a disproportionate number of poles from any attachment rate calculation. [136]

101. If an electric utility accommodates attachments to 30-foot poles and can account for them separately, the Electric Utilities suggest that the FCC adopt an alternative formula for attachments to such poles that more accurately reflects the actual space allocations. Such a formula is warranted because attachments on 30-foot service poles utilize equal space allocations regardless of whether the attachment is made by the electric, telephone or cable television company.

102. In this event, for rate calculation purposes, space on a 30-foot pole should be allocated as follows: 5 feet of the pole is placed underground and 19'8" represents the nonusable space above ground necessary to allow for 15'6" of ground clearance required by NESC. [137] This leaves 5.4 feet for attachments. The NESC still requires the 40-inch safety space, thus leaving 24 inches available for actual attachment use. Today, telephone service and electric utility lateral service attachments typically occupy

---

[136] The Electric Utilities urge the Commission to allow for the deduction of poles of 30 feet and less from the calculation of the net costs of a bare pole, but they do not seek a similar deduction in the carrying charges component of the rate calculation. The quantity of, and investment in, poles of 30 feet or less can be readily identified in Account 364. In offsetting Account 364 in the numerator of the calculation, a correlating offset is made in the denominator. Thus, there is no double counting and the underlying data is not skewed.

[137] See Exhibit 5 for a detailed depiction of the space allocation proposed by the Electric Utilities for 30-foot service poles.

one foot of space. As all of the space on the 30-foot pole is occupied, no additional attachments are possible. In some regions where loading factors are not a barrier, a single additional attachment may be possible when it can be attached in parallel to the telephone utility attachment. Additionally, such poles have no cross arms, thus eliminating the need for the 15% adjustment for such pole equipment.

103. In light of these practices, the Electric Utilities propose the following formula:

$$\frac{\text{Cost of a 30-Foot Pole}}{\text{Number of 30-foot Poles}} \times \text{Allocation Factor} \times \text{Carrying Charges}$$

The allocation factor is represented by the number of attachers. For example, in the case of a standard 30-foot pole with three attachers, the allocation would be 33% per attacher. If the FCC is unwilling to allow a separate formula for 30-foot poles, then it must revisit its assumption that, on the average pole, the electric utility occupies 7'6" of space.

b. The FCC Must Include Additional Accounts In The Calculation Of Net Pole Investment

104. To reiterate, the numerator of the current pole attachment rate formula only includes Account 364.

$$\frac{\text{A/C 364 (Gross Pole Investment) - Depreciation Reserve (Poles) - Accumulated Deferred Income Taxes (Poles)} \times .85 \text{ of Net Pole Investment}}{\text{Number of Poles}}$$

105. Portions of FERC accounts for lightning arresters and grounding installations under Accounts 365 (overhead conductors and devices) and 368 (line

transformers) also should be included in the numerator of the formula when calculating the net cost of a bare pole. The modified formula should be as follows:

Formula Component	Description	Formula
NPIP	Net Pole Investment per Pole	NPI / No. of Poles
NPI	Net Pole Investment	(364P + 365P + 368P) - Assoc. Accum. Depreciation * - Assoc. Accum Deferred Taxes**
364P	Pole Related Portion of A/C 364	0.85 x A/C 364
365P	Pole Related Portion of A/C 365	0.11 x A/C 365
368P	Pole Related Portion of A/C 368	0.05 x A/C 368

* Proportional share using proper allocation techniques.

** Proportional share using proper allocation techniques. If the state utility commission includes the reserve for deferred income taxes in the utility's capital structure at zero cost, this adjustment is not necessary.

106. Account 365 includes the installed cost of neutral wires, ground rods, bonding wires that provide grounds and bonds for all cables attached to a pole, and lightning arresters used for distribution purposes. [138]

107. Account 365 also includes initial tree trimming that must also be included in the cost of the pole. When the area in which a pole is to be placed is surrounded by overgrowth or is near a tree, the overgrowth or tree must be removed in order to place the pole. Trees and shrubs growing in the path between poles must also be trimmed back or removed to ensure that cables and wires do not become entangled as they are being installed. The cost of eliminating such trees and overgrowth prior to setting the poles are currently borne solely by the electric utility, but the resulting benefit is enjoyed by all attachees. Where tree trimming is required as a necessary precursor to

---

[138] See 18 C.F.R. Part 101 (1996).

placing a pole and making wireline attachments, it is critical and reasonable that the associated costs are included in the cost of a bare pole.

108. The installed cost of lightning arresters attached to line transformers are captured in Account 368, and thus a portion of Account 368 must be included in the cost of a pole as well.[139] The Commission is mistaken in its belief that the lightning arrestors accounted for in Account 368 only protect equipment used to transform electricity to the voltage used by customers.[140] These lightning arrestors also protect the pole itself, and thus attachers should share in the cost of this equipment. In accordance with FERC accounting, the costs associated with lightning arrestors are captured in Account 368. The protective function served by the lightning arrestors is virtually the same as the equipment accounted for in Account 365. A utility pole is a conductor for lightning and must be grounded. Sections 9 and 21 of the NESC state that all messenger wires and guys, including those used for CATV and telecommunications, are also required to be grounded at poles.[141]

109. Grounds and lightning arresters that protect the pole are provided by the utility as a pole owner and are accounted for in FERC Accounts 365 and 368.[142] If the grounding and lightning arresters included in these accounts were not on the pole and the pole were struck by lightning, the likelihood of the pole splitting or catching fire

---

139/ Id.

140/ NPRM ¶ 18 & n.55.

141/ 1997 NESC, Rules 92C, 99, 215C.

142/ 18 C.F.R. Part 101.

is increased significantly. The protective function that this equipment provides to a pole is critical to ensuring that the pole need not be prematurely replaced.

110. In addition, attachers benefit from the existence of the equipment in these accounts. Cable operators and telecommunications companies use the grounding systems to protect their own equipment and for compliance with Sections 9 and 21 of the NESC.[143] Any joint user with metallic cables benefits from the utility's ground wires because it must bond from its sheath to the ground to minimize potential differences in circulating currents. Joint users also benefit from the utility's lightning arresters since they provide protection from voltage surges for both facilities.

111. In sum, a portion of the facilities included in Accounts 365 and 368 are essential to the protection of the pole and are used by, and are useful to, cable television operators and telecommunications carriers. Grounding installations, lightning arresters, tree trimming and clearing are necessary to placing poles and are directly related to the protection of the pole and the attaching entities' equipment. For this reason, to more accurately reflect the true costs of allowing parties to attach to poles, the Electric Utilities support the inclusion of 11% of the costs captured in Account 365 and 5% of Account 368 in the calculation of the net cost of a bare pole.[144] The 11% and 5% represent the costs captured in accounts 365 and 368 respectively that can be attributed to poles.

---

[143] 1997 NESC, Rules 92C, 215C.

[144] Depreciation reserve and accumulated deferred income taxes would, of course, be deducted from Accounts 365 and 368, as they currently are deducted from Account 364.

c. *General And Intangible Plant Should Be Included In The Cost Of A Bare Pole*

112. The Electric Utilities urge the Commission to include a portion of General and Intangible Plant in the calculation of the cost of a bare pole. The FCC's current formula excludes a portion of electric utility plant that directly and/or indirectly benefits attachers. In ratemaking proceedings, General and Intangible Plant is allocated to all classes of service and all users of the utility's services. General and Intangible Plant support all the other plant functions of the utility including the distribution function, which includes pole plant (accounts 364, 365, etc.) and is shown on the Electric Utilities' FERC Form 1s. The modified formula would be:

$$\frac{\text{[Pole Investment - Depreciation Reserve (Poles) - Accumulated Deferred Income Taxes (Poles)] + [General/Intangible Plant Investment - Depreciation Reserve - Accumulated Deferred Income Taxes]}}{\text{Number of Poles}}$$

113. General Plant [145] includes the following FERC accounts:

389 Land and Land Rights

390 Structures and Improvements

391 Office Furniture and Equipment

392 Transportation Equipment

393 Stores Equipment

394 Tools, Shop and Garage Equipment

---

[145] Many utilities now lease a substantial portion of the general plant equipment. Leased equipment would not be reflected in these accounts. Lease rental payments would be booked to the appropriate expense account.

395 Laboratory Equipment

396 Power Operated Equipment

397 Communication Equipment

398 Miscellaneous Equipment

399 Other Tangible Property

114. Even from the brief description of these accounts noted above, it is apparent that the items accounted for are relevant to constructing and maintaining poles. For example, the desks, telephones, computers, and the buildings themselves used by employees involved in joint use contracts and services are generally captured in accounts 390, 391 and 397. Transportation equipment used to construct and maintain the poles is captured in account 392, with the garage equipment used to repair this equipment in account 394. Stores equipment used to move and store the poles, and all the associated hardware, is in account 393.

115. Intangible Plant includes the following FERC accounts:

301 Organization

302 Franchises and Consents

303 Miscellaneous Intangible Plant

116. Account 301 includes fees and expenses for incorporation. Account 302 includes amounts paid to various governments for franchises. Account 303 includes the cost of patent rights, licenses, privileges and other intangible property important for utility operations.

117. Intangible and General Plant is plant common to all a utility's functions, including the provision of attachment services and should be reflected in the pole attachment rate. A reasonable allocation method to assign a portion of General and Intangible Plant to pole plant is:

Formula Component	Description	Formula
TNPIP	Total Net Plant Investment Per Pole	(NPI + GPI) / No. of Poles
GPI	General/Intangible Plant Investment	GPIP - Assoc. Accum. Depreciation *
		- Assoc. Accum. Deferred Taxes **
GPIP	Pole Portion of General Plant	(PI / FUP) X (General Plant + Intangible Plant)
PI	Pole Investment	364P + 365P + 368P
FUP	Functional Utility Plant	Total Utility Plant - General Plant - Intangible Plant

* Proportional share using proper allocation techniques.

** Proportional share using proper allocation techniques. If the state utility commission includes the reserve for deferred income taxes in the utility's capital structure at zero cost, this adjustment is not necessary.

D. The Commission's Current Carrying Charge Calculation Is Incomplete And Must Be Revised.

118. The Commission's calculation of carrying charges in the current pole attachment rate formula involves several elements: (1) administrative expenses; (2) maintenance expenses; (3) depreciation expenses; (4) tax expenses; and (5) the cost of capital. [146] Past Commission decisions establish the specific manner in which the carrying charges should be calculated. [147]

---

[146] NPRM ¶ 9-11.

[147] In the Matter of Amendment of Rules and Policies Governing the Attachment of Cable Television Hardware to Utility Poles, 2 FCC Rcd 4387 (1987); see also In the Matter of Amendment of Rules and Policies Governing the Attachment of Cable Television Hardware to Utility Poles, 4 FCC Rcd 468 (1989).

119. In these Comments, the Electric Utilities suggest a change in the manner in which maintenance expenses are calculated, expanding the maintenance carrying charge category to reflect operation expenses and revising the approach for determining the cost of capital.

1. The Current Maintenance Expense Calculation Does Not Reflect Actual Maintenance Expenses

120. Maintenance expenses are currently calculated as follows:

A/C 593 (Maintenance of Overhead Lines)
A/Cs 364 (Poles, Towers and Fixtures),
365 (Overhead Conductors) and 369 (Services) -
Depreciation Reserve for A/Cs 364, 365, 369 -
Accumulated Deferred Income Taxes for A/Cs 364, 365, 369

This approach completely fails to address the operations component of an Operations and Maintenance ("O&M") expense calculation and does not reflect all of the actual costs a utility incurs when maintaining poles, particularly the supervision and engineering aspects of the maintenance and operation function. For this reason, the maintenance expense calculation should be revised as shown:

Formula Component	Description	Formula
OMCC	O&M Carrying Charge Percent	OMP / NPI
OMP	O&M Poles	OEP + MEP
OEP	Operation Expense Poles	580P + 583P + 588P
MEP	Maintenance Expense Poles	590P + 593P + 595P + 598P
580P	Pole Portion of A/C 580	(NPI / NDP) x A/C 580
583P	Pole Portion of A/C 583	[(365P + 368P)/(A/C 365 + A/C 368 + A/C 369)] x A/C 583
588P	Pole Portion of A/C 588	(NPI / NDP) x A/C 588
590P	Pole Portion of A/C 590	(NPI / NDP) x A/C 590
593P	Pole Portion of A/C 593	(NOAP / NOA) x A/C 593
595P	Pole Portion of A/C 595	.05 x A/C 595
598P	Pole Portion of A/C 598	(NPI / NDP) x A/C 598
NDP	Net Distribution Plant	Distribution Plant - Accum. Depreciation Dist. Plt. - Assoc. Accum. Deferred Taxes**
NOAP	Net Overhead Accounts Poles	(363P + 365P) - Assoc. Accum. Deprec.* - Assoc. Accum. Deferred Taxes**
NOA	Net Overhead Accounts	(A/C 364 + A/C 365 + A/C 368) - Assoc. Accum. Deprec.* - Assoc. Accum. Deferred Taxes**

* Proportional share using proper allocation techniques.

** Proportional share using proper allocation techniques. If the state utility commission includes the reserve for deferred income taxes in the utility's capital structure at zero cost, this adjustment is not necessary.

121. Account 590 includes the cost of labor and expenses incurred in the general supervision and direction of maintenance of an electric utility's distribution system.[148] Such expenses are not currently included in the maintenance calculation and are not recovered elsewhere in the pole attachment rate calculation. Because the Account 590 maintenance expenses are directly attributable to the function of maintaining the pole distribution network used for pole attachments, the expenses should properly be included in the rate calculation.

---

[148] 18 C.F.R. Part 101.

122. Account 593 includes the cost of labor, materials used and expenses incurred in the maintenance of overhead lines.[149] Pole costs captured in this account include tree trimming, ground line treatment, repair of pole support platforms and realigning and straightening poles. These functions preserve the integrity of the pole used by attachers and thus a portion of the costs incurred to perform these functions should be recoverable from attachers.

123. Account 595 includes the cost of labor, materials used and expenses incurred to maintain line transformers, including lightning arrestors that contribute to the protection of the pole.[150] Therefore, a small portion of the maintenance expenses associated with the lightning arrestors should also be included in any pole attachment rate calculation.

124. Account 598 includes the cost of labor, materials used and expenses incurred in the maintenance of plant such as office furniture and equipment used to support the distribution function.[151] Inclusion of this expense is justified by the same premise that allows telephone utilities to recover such expenses under FCC Account 6120.

149/ Id.

150/ 18 C.F.R. Part 101.

151/ Id.