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N.C. Utilities Commission**

**EXHIBIT PDK 5**

# Roanoke Connect reports progress



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KELFORD – Roanoke Electric Cooperative (REC) is moving forward with its plan for fiber-optic communication for the more than 14,500 customers in its seven-county service area of Bertie, Halifax, Hertford, Northampton, Gates, Perquimans and Chowan counties.

Four of those counties – Bertie, Hertford, Northampton, and Gates – participated in a pilot program to test how the system could be used to bring high-speed internet to customers, an important step toward bridging the digital divide for REC members in northeastern North Carolina.

At the Oct. 16 monthly meeting here of the Bertie County Commissioners, REC Chief Operating Officer Marshall Cherry presented an update to the Board on status of the project.

REC has completed Phase-1, a broadband project that connects 12 substations with fiber. They are now in the early stages of expanding this connectivity deeper into its service territory using a combination of fiber and fixed wireless technology.

This spring, the cooperative invited a small group of member-owners to test smart-grid technologies enabled by internet service.

About 60 REC customers received free high-speed internet, water-heater control devices and smart thermostats through the pilot program with their results used for evaluation.

In Phase-2, REC is partnering with an internet service provider to build on the “Roanoke Connect” network and extend access to local homes and businesses.

"This allows connectivity across all (12) substations and enables us to do many high impact services for the member owners of REC, including better outage management, engagement with our overall electric utility usage, utility alerts, and things of that nature; so the value proposition has really risen, or will rise as a result of this project," Cherry said.

He added this will allow for better management of the system and bring better efficiency to the REC systems such as it never had before.

Cherry says Roanoke Electric has partnered with ECC Technologies to install a dark fiber network that will assist local business and citizens with the high speed internet service.

The project features some 200 miles of fiber optic infrastructure, half of which will be brand new, and the other will be leased from the existing fiber. Roanoke Connect will also link up with the statewide MCNC system which will run through the four counties.

Construction work will begin in the Ahoskie area of Hertford County in the next several months. In addition to insuring the Commissioners that Bertie County's connectivity is also a top priority, Cherry said the project will provide infrastructure needed to boost technology-led economic development

Cherry said it will be a 60 meg(abyte) service available for a \$45 a month subscription charge, and included will be several "smart devices" at no additional charge. Among them will be a wifi-enabled thermostat (the Ecobee3), and a special water heater control that will aid in response services to reduce consumption across the system at peak times and pass the savings on to its customers.

"The return on this investment is high value," Cherry stated. "We're able to do these for our customers as we're building out because the internet package is what allows us to provide many of these services."

Cherry said the fiber build-out for Phase-2 of the project will begin in January 2018 and that's when it will also begin the deployment schedule for consumers. REC plans to use crowd fiber, which will alert them to pockets in their service area that are interested most in having the service.

"It's going to be a competitive system," Cherry cautioned. "And we've got a lot of demand. We're hearing from every county on our system."

Jeffrey Brooks of ECC-Technologies – a marketing partner with REC – is helping with the Community Development Block Grant (CDBG) assisting in the project.

"This is win-win", Brooks said. "It benefits REC and regular folks who are in these counties. This is a fixed digital wireless service delivering speeds in excess of what the FCC defines as true broadband."

The CDBG would fund part of the development of the infrastructure, according to Brooks, and bring it into these economically disadvantaged areas.

"We want this area (Bertie County) to be for large-scale deployment of services," Brooks added. "While every area gets a little bit of it, you would be number-one."

Brooks said he will be returning to the area in November for a second CDBG public hearing.

Commissioner Ernestine Bazemore inquired about the fees with reference to the demographics of customer area and Cherry reiterated the water heater and thermostat are free, but the \$45 is basically for internet service.

"There is a six-month discount we will be offering which will reduce it by about \$5 monthly," Cherry acknowledged. "Another \$5 is also available to them for the life of their equipment."

He said the Phase-1 goal of 30 percent interest from customers has been met and that the next rollout will begin in the next several weeks.

A citizen asked Cherry what incentive is there for REC customers to switch internet service providers.

"If you have DSL then the advantage is faster service since we are 60 megs," Cherry answered.

Commissioner Ron Wesson said the cluster map of school children identified when Bertie County Schools tried a rollout of 'Connect Bertie' back in the early 2000's – some 85 percent of the student population – is available if REC would like to take advantage of those numbers.

Cherry and Brooks closed by saying they would keep the Commissioner abreast of REC's progress and schedule a second CDBG public hearing for Nov. 6.

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# EXHIBIT PDK 6

**CONNECTING  
AMERICA:  
THE NATIONAL  
BROADBAND PLAN**

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# INFRASTRUCTURE

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## CHAPTER 6



**JUST AS WIRELESS NETWORKS USE PUBLICLY OWNED SPECTRUM**, wireless and wired networks rely on cables and conduits attached to public roads, bridges, poles and tunnels. Securing rights to this infrastructure is often a difficult and time-consuming process that discourages private investment. Because of permitting and zoning rules, government often has a significant role in network construction. Government also regulates how broadband providers can use existing private infrastructure like utility poles and conduits. Many state and local governments have taken steps to encourage and facilitate fiber conduit deployment as part of public works projects like road construction. Similarly, in November 2009, the Federal Communications Commission (FCC) established timelines for states and localities to process permit requests to build and locate wireless equipment on towers.<sup>1</sup>

While these are positive steps, more can and should be done. Federal, state and local governments should do two things to reduce the costs incurred by private industry when using public infrastructure. First, government should take steps to improve utilization of existing infrastructure to ensure that network providers have easier access to poles, conduits, ducts and rights-of-way. Second, the federal government should foster further infrastructure deployment by facilitating the placement of communications infrastructure on federally managed property and enacting “dig once” legislation. These two actions can improve the business case for deploying and upgrading broadband network infrastructure and facilitate competitive entry.

## RECOMMENDATIONS

### Improving utilization of infrastructure

- The FCC should establish rental rates for pole attachments that are as low and close to uniform as possible, consistent with Section 224 of the Communications Act of 1934, as amended, to promote broadband deployment.
- The FCC should implement rules that will lower the cost of the pole attachment “make-ready” process.
- The FCC should establish a comprehensive timeline for each step of the Section 224 access process and reform the process for resolving disputes regarding infrastructure access.
- The FCC should improve the collection and availability of information regarding the location and availability of poles, ducts, conduits and rights-of-way.
- Congress should consider amending Section 224 of the Act to establish a harmonized access policy for all poles, ducts, conduits and rights-of-way.

- The FCC should establish a joint task force with state, Tribal and local policymakers to craft guidelines for rates, terms and conditions for access to public rights-of-way.

### Maximizing impact of federal resources

- The U.S. Department of Transportation (DOT) should make federal financing of highway, road and bridge projects contingent on states and localities allowing joint deployment of conduits by qualified parties.
- Congress should consider enacting “dig once” legislation applying to all future federally funded projects along rights-of-way (including sewers, power transmission facilities, rail, pipelines, bridges, tunnels and roads).
- Congress should consider expressly authorizing federal agencies to set the fees for access to federal rights-of-way on a management and cost recovery basis.
- The Executive Branch should develop one or more master contracts to expedite the placement of wireless towers on federal government property and buildings.

## 6.1 IMPROVING UTILIZATION OF INFRASTRUCTURE

The cost of deploying a broadband network depends significantly on the costs that service providers incur to access conduits, ducts, poles and rights-of-way on public and private lands.<sup>2</sup> Collectively, the expense of obtaining permits and leasing pole attachments and rights-of-way can amount to 20% of the cost of fiber optic deployment.<sup>3</sup>

These costs can be reduced directly by cutting fees. The costs can also be lowered indirectly by expediting processes and decreasing the risks and complexities that companies face as they deploy broadband network infrastructure.

The FCC has already begun to take important steps in this direction with policies that will speed the deployment of wireless equipment on towers. With regard to other infrastructure such as utility poles, the FCC has authority to improve the deployment process and should use that authority. Lowering the costs of infrastructure access involves every level of government; active consultation among all levels of government will be needed to put in place pro-deployment policies such as joint trenching, conduit construction and placement of broadband facilities on public property.

**RECOMMENDATION 6.1:** The FCC should establish rental rates for pole attachments that are as low and close to uniform as possible, consistent with Section 224 of the Communications Act of 1934, to promote broadband deployment.

As Exhibit 6-A shows, the rental rates paid by communications companies to attach to a utility pole vary widely—from approximately \$7 per foot per year for cable operators to \$10 per foot per year for competitive telecommunications companies to more than \$20 per foot per year for some incumbent local exchange carriers (ILECs).<sup>4</sup> The impact of these rates can be particularly acute in rural areas, where there often are more poles per mile than households.<sup>5</sup> In a rural area with 15 households per linear mile, data suggest that the cost of pole attachments to serve a broadband customer can range from \$4.54 per month per household passed (if cable rates are used)

to \$12.96 (if ILEC rates are used). If the lower rates were applied, and if the cost differential in excess of \$8 per month were passed on to consumers, the typical monthly price of broadband for some rural consumers could fall materially.<sup>6</sup> That could have the added effect of generating an increase—possibly a significant increase—in rural broadband adoption.

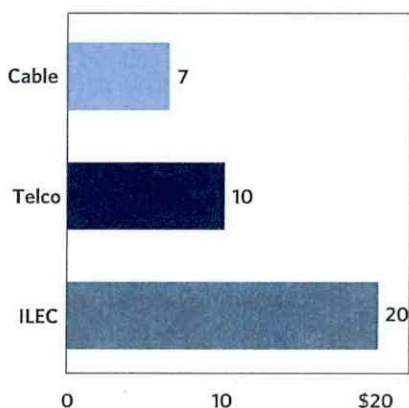
Different rates for virtually the same resource (space on a pole), based solely on the regulatory classification of the attaching provider, largely result from rate formulas established by Congress and the FCC under Section 224 of the Communications Act of 1934, as amended (“the Act”).<sup>8</sup> The rate structure is so arcane that, since the 1996 amendments to Section 224, there has been near-constant litigation about the applicability of “cable” or “telecommunications” rates to broadband, voice over Internet protocol and wireless services.<sup>9</sup>

To support the goal of broadband deployment, rates for pole attachments should be as low and as close to uniform as possible. The rate formula for cable providers articulated in Section 224(d) has been in place for 31 years and is “just and reasonable” and fully compensatory for utilities.<sup>10</sup> Through a rulemaking, the FCC should revisit its application of the telecommunications carrier rate formula to yield rates as close as possible to the cable rate in a way that is consistent with the Act.

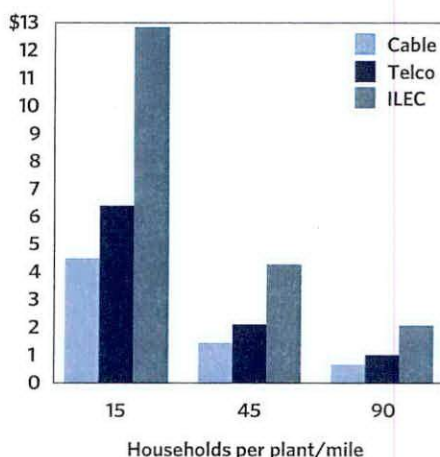
Applying different rates based on whether the attacher is classified as a “cable” or a “telecommunications” company distorts attachers’ deployment decisions. This is especially true with regard to integrated, voice, video and data networks. This uncertainty may be deterring broadband providers that pay lower pole rates from extending their networks or adding capabilities (such as high-capacity links to wireless towers). By

**Exhibit 6-A:**  
Annual Pole Rates  
Vary Considerably by  
Provider Type<sup>7</sup>

**Average pole attachment rates**  
Dollars per foot of pole space per year



**Pole attachment operating expenditure/subscribing household**  
Dollars per foot of pole space per year





expanding networks and capabilities, these providers risk having a higher pole rental fee apply to their entire network.<sup>11</sup>

FCC rules that move toward low rates that are as uniform as possible across service providers would help remove many of these distortions. This approach would also greatly reduce complexity and risk for those deploying broadband.

**RECOMMENDATION 6.2:** The FCC should implement rules that will lower the cost of the pole attachment “make-ready” process.

Rearranging existing pole attachments or installing new poles—a process referred to as “make-ready” work—can be a significant source of cost and delay in building broadband networks. FiberNet, a broadband provider that has deployed 3,000 miles of fiber in West Virginia, states that “the most significant obstacle to the deployment of fiber transport is FiberNet’s inability to obtain access to pole attachments in a timely manner.”<sup>12</sup>

Make-ready work frequently involves moving wires or other equipment attached to a pole to ensure proper spacing between equipment and compliance with electric and safety codes. The make-ready process requires not only coordination between the utility that owns the pole and a prospective broadband provider, but also the cooperation of communications firms that have already attached to the pole. Each attaching party is generally responsible for moving its wires and equipment, meaning that multiple visits to the same pole may be required simply to attach a new wire.

Reform of this inefficient process presents significant opportunities for savings. FiberNet commented that its make-ready charges for several fiber runs in West Virginia averaged \$4,200 per mile and took 182 days to complete,<sup>13</sup> but the company estimates that these costs should instead have averaged \$1,000 per mile.<sup>14</sup> Another provider, Fibertech, states that the make-ready process averages 89 days in Connecticut and 100 days in New York, where state commissions regulate the process directly.<sup>15</sup>

Delays can also result from existing attachers’ action (or inaction) to move equipment to accommodate a new attacher, potentially a competitor.<sup>16</sup> As a result, reform must address the obligations of existing attachers as well as the pole owner.

An evaluation of best practices at the state and local levels reveals ample opportunities to manage this process more efficiently. Yet, absent regulation, pole owners and existing attachers have few incentives to change their behavior.

To lower the cost of the make-ready process and speed it up, the FCC should, through rulemaking:

- Establish a schedule of charges for the most common categories of work (such as engineering assessments and pole construction).
- Codify the requirement that gives attachers the right to use

space- and cost-saving techniques such as boxing or extension arms where practical and in a way that is consistent with pole owners’ use of those techniques.<sup>17</sup>

- Allow prospective attachers to use independent, utility-approved and certified contractors to perform all engineering assessments and communications make-ready work, as well as independent surveys, under the joint direction and supervision of the pole owner and the new attacher.<sup>18</sup>
- Ensure that existing attachers take action within a specified period (such as 30 days) to accommodate a new attacher. This can be accomplished through measures such as mandatory timelines and rules that would allow the pole owner or new attacher to move existing communications attachments if the timeline is not met.
- Link the payment schedule for make-ready work to the actual performance of that work, rather than requiring all payment up front.

These cost-saving steps can have an immediate impact on driving fiber deeper into networks, which will advance the deployment of both wireline and wireless broadband services.

**RECOMMENDATION 6.3:** The FCC should establish a comprehensive timeline for each step of the Section 224 access process and reform the process for resolving disputes regarding infrastructure access.

There are no federal regulations addressing the duration of the entire process for obtaining access to poles, ducts, conduit and rights-of-way. While the FCC in the past has recognized that “time is critical in establishing the rate, terms and conditions for attaching,” current FCC rules only require that a utility provide a response to an application within 45 days.<sup>19</sup> The FCC does not have any deadlines for subsequent steps in the process, which can drag on for months if not years.<sup>20</sup> This causes delays in the deployment of broadband to communities and anchor institutions.<sup>21</sup>

Several states, including Connecticut and New York, have established firm timelines for the entire process, from the day that a prospective attacher files an application, to the issuance of a permit indicating that all make-ready work has been completed.<sup>22</sup> Timelines speed the process considerably in states where they have been implemented,<sup>23</sup> thus facilitating the deployment of broadband.

The FCC should establish a federal timeline that covers each step of the pole attachment process, from application to issuance of the final permit. The federal timeline should be implemented through a rulemaking and be comprehensive and applicable to all forms of communications attachments.<sup>24</sup> In addition, the FCC should establish a timeline for the process of certifying wireless equipment for attachment.<sup>25</sup>



The FCC also should institute a better process for resolving access disputes. For large broadband network builds, the pole attachment process is highly fragmented and often involves dozens of utilities, cable providers and telecommunications providers in multiple jurisdictions. Yet there is no established process for the timely resolution of disputes.<sup>26</sup>

The FCC has the authority to enforce its pole attachment rules, but today it generally attempts to informally resolve attachment disputes through mediation. This process has significant flaws. Under the current system of case-by-case adjudication, the attacher always bears the burden of bringing a formal complaint.<sup>27</sup> The formal dispute rules also do not provide for compensation dating from the time of the injury, so attachers have minimal incentive to initiate costly formal pole attachment cases that may linger for years.

Also, because time is often of the essence during the make-ready process, methods for resolving disputes over application of individual safety and engineering standards may be necessary. Informal local procedures and mediation may sometimes result in satisfactory settlements, but they do not create precedents for what constitutes a “just and reasonable” practice under Section 224 of the Act.

In revising its dispute resolution policies, the FCC should consider approaches that not only speed the process but also provide future guidelines for the industry. Institutional changes, such as the creation of specialized fora and processes for attachment disputes, and process changes, such as target deadlines for resolution, could expedite dispute resolution and serve the overarching goal of lowering costs and promoting rapid broadband deployment. The FCC also could use its authority under Section 224 to require utilities to post standards and adopt procedures for resolving safety and engineering disagreements and encourage appropriate state processes for resolving such disputes. Finally, awarding compensation that dates from the denial of access could stimulate swifter resolution of disputes.

**RECOMMENDATION 6.4:** The FCC should improve the collection and availability of information regarding the location and availability of poles, ducts, conduits and rights-of-way.

There are hundreds of private and public entities that own and control access to poles, ducts, conduits and rights-of-way, and an even greater number of parties that use that infrastructure. Accurate information about pole owners and attachments is critical if there is to be a timely and efficient process for accessing and utilizing this important infrastructure.<sup>28</sup> The FCC should ensure that attachers and pole owners have the data they need to lower costs and accelerate the buildout of broadband networks.

Consistent with its current jurisdiction under Section 224, the FCC should ensure that information about utility poles and conduits is up-to-date, readily accessible and secure, and

that the costs and responsibility of collecting and maintaining data are shared equitably by owners and users of these vital resources. For example, data could be collected systematically as in Germany, which is mapping fiber, ducts and conduits and is planning to coordinate these data with information about public works and infrastructure projects.<sup>29</sup> Existing industry efforts to collect and coordinate data could be expanded and made more robust.<sup>30</sup> In addition, the participation of all pole owners subject to Section 224 and attaching parties in any such database effort could be regulated and streamlined. These databases should be easily searchable, identify the owner of each pole and should contain up-to-date records of attachments and make-ready work that has been performed. For conduits and ducts, any database should note whether there is space available. Whichever methods are used, data must be regularly updated, secure and accessible in order to further the FCC's efforts to ensure that broadband providers have efficient access to essential infrastructure information.

**RECOMMENDATION 6.5:** Congress should consider amending Section 224 of the Act to establish a harmonized access policy for all poles, ducts, conduits and rights-of-way.

Even if the FCC implemented all of the recommendations related to its Section 224 authority, additional steps would be needed to establish a comprehensive national broadband infrastructure policy. As previously discussed, without statutory change, the convoluted rate structure for cable and telecommunications providers will persist. Moreover, due to exemptions written into Section 224, a reformed FCC regime would apply to only 49 million of the nation's 134 million poles.<sup>31</sup> In particular, the statute does not apply in states that adopt their own system of regulation and exempts poles owned by co-operatives, municipalities and non-utilities.<sup>32</sup>

The nation needs a coherent and uniform policy for broadband access to privately owned physical infrastructure. Congress should consider amending or replacing Section 224 with a harmonized and simple policy that establishes minimum standards throughout the nation—although states should remain free to enforce standards that are not inconsistent with federal law. The new statutory framework could provide that:

- All poles, ducts, conduits and rights-of-way be subject to a regulatory regime addressing a minimum set of criteria established by federal law.
- All broadband service providers, whether wholesale or retail, have the right to access pole attachments, ducts, conduit and rights-of-way based on reasonable rates, terms and conditions.
- Infrastructure access be provided within standard timelines established by the FCC, and that the FCC has the authority to award damages for non-compliance.



- The FCC has the authority to compile and update a comprehensive database of physical infrastructure assets.

**RECOMMENDATION 6.6: The FCC should establish a joint task force with state, Tribal and local policymakers to craft guidelines for rates, terms and conditions for access to public rights-of-way.**

Because local, state, Tribal and federal governments control access to important rights-of-way and facilities, a comprehensive broadband infrastructure policy necessarily requires a coordinated effort among all levels of government.

There is wide diversity among state and local policies regarding access to and payment for accessing public rights-of-way. Many jurisdictions charge a simple rental fee. Other jurisdictions use other compensation schemes, including per-foot rentals, one-time payments, in-kind payments (such as service to public institutions or contributions of fiber to city telecommunications departments) and assessments against general revenues.<sup>33</sup> Some jurisdictions calculate land rental rates based on local real estate “market value” appraisals.

Many states have limited the rights-of-way charges that municipalities may impose, either by establishing uniform rates (Michigan) or by limiting fees to administrative costs (Missouri).<sup>34</sup> Other states, including South Carolina, Illinois and Florida, do not allow municipalities to collect rights-of-way fees directly; instead, the state compensates local governments for the use of their rights-of-way with proceeds from state-administered telecommunications taxes.

Broadband service providers often assert that the expense and complexity of obtaining access to public rights-of-way in many jurisdictions increase the cost and slow the pace of broadband network deployment.<sup>35</sup> Representatives of state and local governments dispute many of these contentions.<sup>36</sup> However, nearly all agree that there can and should be better coordination across jurisdictions on infrastructure issues.<sup>37</sup>

Despite past efforts by the National Telecommunications and Information Administration (NTIA) and the National Association of Regulatory Utility Commissioners (NARUC),<sup>38</sup> a coordinated approach to rights-of-way policies has not taken hold. There are limits to state and local policies; Section 253 of the Communications Act prohibits state and local policies that impede the provision of telecommunications services while allowing for rights-of-way management practices that are nondiscriminatory, competitively neutral, fair and reasonable.<sup>39</sup> However, disputes under Section 253 have lingered for years, both before the FCC and in federal district courts.<sup>40</sup>

In consultation and partnership with state, local and Tribal authorities, the FCC should develop guidelines for public rights-of-way policies that will ensure that best practices from state and local government are applied nationally. For example, establishing common application information and inspection

protocols could lower administrative costs for the industry and governmental agencies alike. Fee structures should be consistent with the national policy of promoting greater broadband deployment. A fee structure based solely upon the market value of the land being used would not typically take into account the benefits that the public as a whole would receive from increased broadband deployment, particularly in unserved and underserved areas. In addition, broadband network construction often involves multiple jurisdictions. The timing of the process and fee calculations by one local government may not take into account the benefits that constituents in neighboring jurisdictions would receive from increased broadband deployment. The cost and social value of broadband cut across political boundaries; as a result, rights-of-way policies and best practices must reach across those boundaries and be developed with the broader public interest in mind.

To help develop this consistent rights-of-way policy, the FCC should convene a joint task force of state, local and Tribal authorities with a mandate to:

- Investigate and catalog current state and local rights-of-way practices and fee structures, building on NTIA’s 2003 compendium and the 2002 NARUC Rights-of-Way Project.
- Identify public rights-of-way and infrastructure policies and fees that are consistent with the national public policy goal of broadband deployment and those that are inconsistent with that goal.<sup>41</sup>
- Identify and articulate rights-of-way construction and maintenance practices that reduce overall capital and maintenance costs for both government and users and that avoid unnecessary delays, actions, costs and inefficiencies related to the construction and maintenance of broadband facilities along public rights-of-way.<sup>42</sup>
- Recommend appropriate guidelines for what constitutes “competitively neutral,” “nondiscriminatory” and “fair and reasonable” rights-of-way practices and fees.
- Recommend a process for the FCC to use to resolve disputes under Section 253. Creating a process should expedite resolution of public rights-of-way disputes in areas either unserved or underserved by broadband.

The FCC should request that the task force make its recommendations within six months of the task force’s creation. These recommendations should then be considered by the FCC as part of a proceeding that seeks industry-wide comment on these issues.



## 6.2 MAXIMIZING IMPACT OF FEDERAL RESOURCES

Federal government can also play an important role in directly lowering the costs of future infrastructure deployment. The federal government has already made efforts to simplify access to federal rights-of-way under President George W. Bush,<sup>43</sup> and to improve access to federal government facilities for wireless services under President William J. Clinton.<sup>44</sup> However, policies have generally taken a permissive approach, simply allowing the federal government to take steps, rather than requiring that those steps be taken.

**RECOMMENDATION 6.7:** The U.S. Department of Transportation (DOT) should make federal financing of highway, road and bridge projects contingent on states and localities allowing joint deployment of conduits by qualified parties.

**RECOMMENDATION 6.8:** Congress should consider enacting “dig once” legislation applying to all future federally funded projects along rights-of-way (including sewers, power transmission facilities, rail, pipelines, bridges, tunnels and roads).

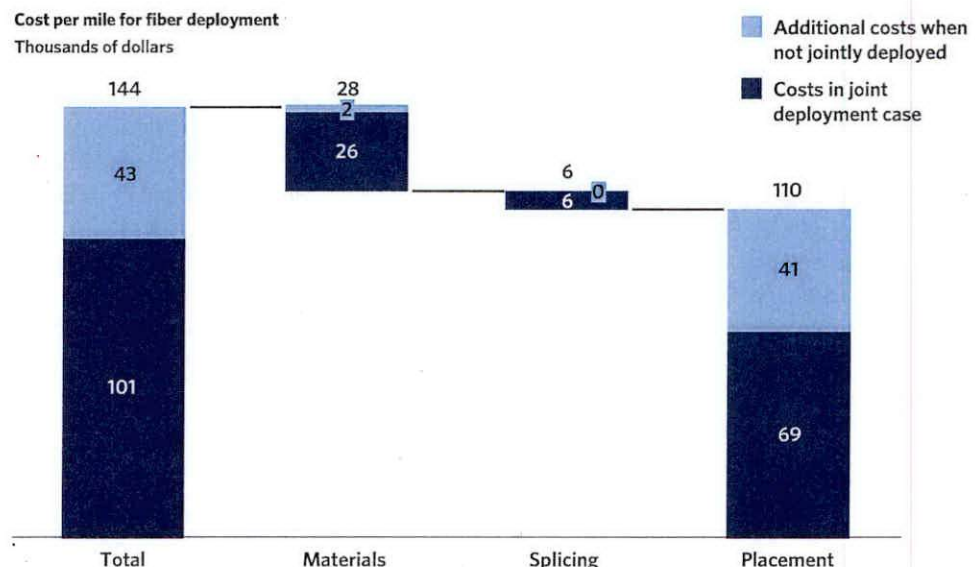
Although pushing fiber deeper into broadband networks considerably improves the performance and reliability of those networks, deploying a mile of fiber can easily cost more than

\$100,000 (see Exhibit 6-B). The largest element of deployment costs is not the fiber itself, but the placement costs associated with burying the fiber in the ground (or attaching it to poles in an aerial build). These placement costs can, in certain cases, account for almost three-quarters of the total cost of fiber deployment. Running a strand of fiber through an existing conduit is 3–4 times cheaper than constructing a new aerial build.<sup>45</sup>

Substantial savings can be captured if fiber builds are coordinated with other infrastructure projects in which the right-of-way (e.g., road, water, sewer, gas, electric, etc.) is already being dug. For example, the city of San Francisco has a “trench once” policy, in which a 5-year moratorium is placed on opening up a road bed once the trench along that road bed has been closed.<sup>47</sup> San Francisco uses a notification process to ensure that other interested parties have the opportunity to install conduits and cabling in the open trench.<sup>48</sup> The city of Boston has implemented a “Shadow Conduit Policy,” in which the first company to request a trench takes a lead role, inviting other companies to add additional empty (or “shadow”) conduits for future use by either the city of Boston or a later entrant.<sup>49</sup> The city of Chicago seeks to “inexpensively deploy excess conduit when streets are opened for other infrastructure and public works projects.”<sup>50</sup> In the Netherlands, a committee in the city of Amsterdam similarly coordinates digging and trenching activities between the public and private sector.<sup>51</sup>

These policies have clear benefits, as shown by the case of Akron, Ohio. When Akron was deploying facilities and conduit to support its public safety network, it shared those facilities with OneCommunity, a northeast Ohio public-private partnership that aggregates demand by public institutions and private

*Exhibit 6-B:  
Joint Deployment Can  
Materially Reduce  
the Cost of Fiber  
Deployment<sup>46</sup>*





broadband service providers. As a result of that coordination, those same facilities and conduits now support health care institutions, schools and Wi-Fi access in Akron.<sup>52</sup> Similarly, along Interstate 91 in western Massachusetts, collaboration among the Massachusetts Department of Transportation, the Massachusetts Broadband Institute and the federal DOT is resulting in the installation of 55 miles of fiber optic cable with 34 interconnection points.<sup>53</sup>

DOT should implement “joint trenching” and conduit policies to lower the installation costs for broadband networks.<sup>54</sup> At a minimum, states and localities undertaking construction along rights-of-way that are partially or fully financed by DOT should be required to give at least 90 days’ notice before projects begin. This would allow private contractors or public entities to add conduits for fiber optic cables in ways that do not unreasonably increase cost, add to construction time or hurt the integrity of the project. Opportunities for joint trenching and conduit deployment are varied, from construction of Intelligent Transportation Systems alongside interstates to building and maintenance of recreational rail trails.<sup>55</sup> As a result, information about potential joint trenching and conduit deployment opportunities should be available and accessible to prospective broadband network providers whenever government engages in an infrastructure project, subject to security precautions.

Congress also should consider enacting “dig once” legislation to extend similar joint trenching requirements to all rights-of-way projects (including sewers, power transmission facilities, rail, pipelines, bridges, tunnels and roads) receiving federal funding.

**RECOMMENDATION 6.9:** Congress should consider expressly authorizing federal agencies to set the fees for access to federal rights-of-way on a management and cost recovery basis.

**RECOMMENDATION 6.10:** The Executive Branch should develop one or more master contracts to expedite the placement of wireless towers on federal government property and buildings.

The federal government is the largest landowner in the country—650 million acres, constituting nearly one-third of the land area of the United States.<sup>56</sup> The federal government’s General Services Administration (GSA) also owns or leases

space in 8,600 buildings nationwide.<sup>57</sup> To effectively deploy broadband, providers often need to be able to place equipment on this federally controlled property, or to use the rights-of-way that pass through the property.

Based on an August 1995 executive memorandum by President Clinton,<sup>58</sup> GSA developed guidelines to allow wireless antennas on federal buildings and land.<sup>59</sup> Additionally, since 1989, GSA has run the National Antenna Program to facilitate wireless tower placement on federal government buildings.<sup>60</sup> On more than 1,900 buildings administered by GSA, there are currently antennas covered by approximately 100 leases that result in millions of dollars in revenue for the Federal Buildings Fund annually.<sup>61</sup> For each of the leases managed by GSA, market rent is charged, and the leases are tightly crafted to cover rooftop space, specific equipment and technology.

Even given this progress, the federal government can do more to facilitate access to its rights-of-way and facilities that it either develops or maintains. In many instances, federal law currently requires that rental fees for rights-of-way controlled by federal agencies be based upon the market value of the land. As a result, these fees are often much higher than the direct costs involved.<sup>62</sup> To facilitate the development of broadband networks, Congress should consider allowing all agencies to set the fees for access to rights-of-way for broadband services on the basis of a direct cost recovery approach, especially in markets currently underserved or unserved by any broadband service provider.

The Executive Branch should also develop one or more master contracts for all federal property and buildings covering the placement of wireless towers. The contracts would apply to all buildings, unless the federal government decides that local issues require non-standard treatment. In the master contracts, GSA should also standardize the treatment of key issues covering rooftop space, equipment and technology. The goal of these master contracts would be to lower real estate acquisition costs and streamline local zoning and permitting for broadband network infrastructure.

While reducing the prices for leases on government property may reduce fees paid to governments at the local, state and federal levels, the decline in prices may also greatly increase the number of companies that acquire leases on government property. In any case, the increased deployment of broadband will stimulate investment and benefit society.

## CHAPTER 6 ENDNOTES

- 1 *Petition for Declaratory Ruling to Clarify Provisions of Section 332(c)(7)(B) to Ensure Timely Siting Review and to Preempt Under Section 253 State and Local Ordinances that Classify All Wireless Siting Proposals as Requiring a Variance*, WT Docket No. 08-165, Declaratory Ruling, 24 FCC Red 13994 (2009).
- 2 See Letter from Judith A. Dumont, Director, Massachusetts Broadband Initiative, to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 09-47, 09-51, 09-137 (Jan. 8, 2010) (Dumont Jan. 8, 2010 *Ex Parte*) at 2 (noting that permitting requirements and procedures for rights of way, poles, conduits and towers "are key to the efficient and streamlined deployment of broadband," and that difficulties in such access "often prove to be the greatest impediment to the efficient, cost-effective, and timely deployment of broadband.").
- 3 We derive this estimate from several sources. OMNIBUS BROADBAND INITIATIVE, THE BROADBAND AVAILABILITY GAP. (forthcoming) See Letter from Thomas Jones, Counsel to FiberNet, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 09-51, WC Docket No. 07-245 (Sept. 16, 2009) (FiberNet Sept. 16, 2009 *Ex Parte*) at 20 (noting average cost for access to physical infrastructure of \$4,611-\$6,487 per mile); *Comment Sought on Cost Estimates for Connecting Anchor Institutions to Fiber—NBP Public Notice #12*, GN Docket Nos. 09-47, 09-51, 09-137, Public Notice, 24 FCC Red 12510 (2009) (NBP PN #12) App. A (Gates Foundation estimate of \$10,500-\$21,120 per mile for fiber optic deployment); see also Letter from Charles B. Stockdale, Fibertech, to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 09-47, 09-51, 09-137 (Oct. 28, 2009) at 1-2 (estimating costs ranging from \$3,000-\$42,000 per mile).
- 4 One wireless carrier has cited instances in which it has been asked to pay a rental rate of \$1,200-\$3,000 per pole per year. See, e.g., Letter from T. Scott Thompson, Counsel for NextG Networks, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 07-245, RM-11293, RM-11303 (June 27, 2008) Attach. at 11.
- 5 See, e.g., Am. Cable Ass'n Comments in re National Broadband Plan NOI, filed June 8, 2009, at 8-9; *Amendment of the Commission's Rules and Policies Governing Pole Attachments*, WC Docket No. 07-245, Report and Order, 15 FCC Red 6453, 6507-08, para. 118 (2000) ("The Commission has recognized that small systems serve areas that are far less densely populated areas than the areas served by large operators. A small rural operator might serve half of the homes along a road with only 20 homes per mile, but might need 30 poles to reach those 10 subscribers.").
- 6 This analysis assumes that the customer purchases from an ILEC that rents all of its poles.
- 7 NCTA Comments in re American Electric Power Service Corp. et al., *Petition for Declaratory Ruling that the Telecommunications Rate Applies to Cable System Pole Attachments Used to Provide Interconnected Voice over Internet Protocol Service*, WC Docket No. 09-154 (filed Aug. 17, 2009) (Pole Attachments Petition), filed Sept. 24, 2009, App. B at 8-10; Letter from Thomas Jones, Counsel, Time Warner Telecom Inc., to Marlene H. Dortch, Secretary, FCC RM-11293, RM-11303 (Jan. 16, 2007) Attach., US Telecom Comments in re Pole Attachments Petition, filed Sept. 24, 2009, at 8; GEORGE S. FORD ET AL., PHOENIX CTR., THE PRICING OF POLE AMENDMENT: IMPLICATIONS AND RECOMMENDATIONS 7 (2008); Independent Telephone and Telecommunications Alliance (ITTA) Comments in re implementation of Section 224 of the Act; *Amendment of the Commission's Rules and Policies Governing Pole Attachments*, WC Docket No. 07-245, Notice of Proposed Rulemaking, 22 FCC Red 20195 (2007) (Pole Attachments NPRM), filed Mar. 7, 2008. As Pelcovits notes, monthly cost assumes 35 poles per mile and a 30% take rate. NCTA Comments in re Pole Attachments Petition, filed Sept. 24, 2009, App. B at 14. Additionally, this analysis assumes that all poles are rented by the broadband provider and not owned by it.
- 8 The variation in rates charged to incumbent LECs also can arise from the history of pole ownership by the incumbent LECs and certain "joint use" agreements that exist between some incumbent LECs and electric utilities.
- 9 See, e.g., *Nat'l Cable & Telecom. Ass'n v. Gulf Power Co.*, 534 U.S. 327 (2002).
- 10 See, e.g., *Alabama Power Co. v. FCC*, 311 F.3d 1357 (11th Cir. 2002); *FCC v. Florida Power Corp.*, 480 U.S. 245 (1987).
- 11 See, e.g., Letter from Daniel L. Brenner, Counsel, Bright House Networks, to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 09-47, 09-51, 09-137 (Jan. 8, 2010) Attach. at 4; Letter from Daniel L. Brenner, Counsel, Bright House Networks, to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 09-47, 09-51, 09-137 (Feb. 16, 2010) Attach. (Affidavit of Nick Lenochi) (providing example of how application of higher telecommunications rate for poles would increase expense of deploying Fast Ethernet connections to a large school district by \$220,000 annually); NCTA Comments in re Pole Attachments Petition, filed Sept. 24, 2009, at 15-17.
- 12 tw telecom et al. Comments in re NBP Staff Workshops PN (*The Commission Welcomes Responses to Staff Workshops*, GN Docket No. 09-51, Public Notice, 24 FCC Red 11592 (WCB 2009) (NBP Staff Workshops PN)), filed Sept. 15, 2009, at 14.
- 13 FiberNet Sept. 16, 2009 *Ex Parte* Attach.; Letter from Thomas Jones, Counsel, FiberNet, LLC, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 07-245, GN Docket No. 09-51 (Nov. 16, 2009) (filed by One Communications Corp.) (FiberNet Nov. 16, 2009 *Ex Parte*) at 3 (providing cost estimate breakdown). Similarly, Fibertech reports that it pays pole owners anywhere from \$225-\$780 to move a single cable on a pole, even though it estimates that it could do the work itself for \$60. Fibertech Comments in re NBP PN #12, filed Oct. 26, 2009, at 2-3; see also Dumont Jan. 8, 2010 *Ex Parte* at 5-6 (proposing changes to pole attachment regulations so as to "facilitate easier access to existing infrastructure," including reform to the application and make-ready process).
- 14 FiberNet Nov. 16, 2009 *Ex Parte* Attach. C (providing cost estimate breakdown).
- 15 Letter from Kelley A. Shields, Counsel, Fibertech and Kentucky Data Link, Inc. (KDL), to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 09-51, WC Docket No. 07-25, RM-11293, RM-11303 (Jan. 7, 2009) Attach. 2 at 2.
- 16 Letter from Joseph R. Lawhon, Counsel, Georgia Power Co., to Marlene H. Dortch, Secretary, FCC, WC Docket No. 07-245, GN Docket Nos. 09-29, 09-51 (Nov. 17, 2009) Attach. B (noting one example covering 294 poles in Georgia in which the electric utility completed its work within 55 days but in which the process of coordinating with existing attachers took an additional 5 months).
- 17 The FCC has already decided that utilities cannot discriminatorily prohibit such techniques when they use those techniques themselves. See *Salsgiver Commc'ns, Inc. v. North Pittsburgh Tel. Co.*, Memorandum Opinion and Order, 22 FCC Red 20536, 20543-44 (EB 2007); *Cavalier Tel. v. Virginia Elec. and Power Co.*, Order and Request for Information, 15 FCC Red. 9563, 9572 (EB 2000). One provider asserts that rules allowing these practices more generally in Connecticut has allowed it to deploy many more miles of fiber in its Connecticut markets. Fibertech & KDL Comments in re Pole Attachments NPRM, filed Mar. 25, 2009, at 7-8.
- 18 Letter from John T. Nakahata, Counsel to Fibertech and KDL, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 07-245, RM 11293, RM 11303, GN Docket Nos. 09-29, 09-51 (July 29, 2009) at 7.
- 19 *Implementation of Section 703(e) of the Telecommunications Act of 1996; Amendment of the Commission's Rules and Policies Governing Pole Attachments, Report and Order*, 13 FCC Red 6777, 6787-88, para. 17 (1998) (1998 Pole Attachment Order).
- 20 See, e.g., Crown Castle Comments in re Pole Attachments NPRM, filed Mar. 11, 2008, at 7 (12 month delay); Sunesys Comments in Petition for Rulemaking of Fibertech Networks, LLC, RM-11303 (Dec. 7, 2005) (Fibertech Petition), filed Jan. 30, 2006, at 11 (15 months); The DAS Forum Comments in re Pole Attachments NPRM, filed Mar. 7, 2008, at 11 (3 years); T-Mobile Comments in re Pole Attachments NPRM, filed Mar. 7, 2008, at 7 (4 years).
- 21 See, e.g., Fibertech & KDL Comments in re Pole Attachments NPRM, filed Mar. 25, 2009, at 4 (describing project to construct fiber to three rural school districts in Kentucky that KDL was unable to complete because of pole access delays); 1998 Pole Attachment Order, 13 FCC Red. at 6788, para. 17 (delays in resolving access disputes can "delay a telecommunication's carrier's ability to provide service and unnecessary[ly] obstruct the process").
- 22 *Order Adopting Policy Statement on Pole Attachments*, Case 03-M-0432 (New York Pub. Serv. Comm'n 2004) (New York Timeline Order) (requiring that all work be completed in 105 days), available at [116 FEDERAL COMMUNICATIONS COMMISSION | WWW.BROADBAND.GOV](http://documents.dps.state.ny.us/public/Common/ViewDoc.aspx?DocRefId={C0C4902C-7B96-4E20-936B-2174CE0621A7}; Review of the State's Public Service Company Utility Pole Make-Ready Procedures</i>, Decision, Docket No. 07-02-13 (Conn. Dep't of Pub. Util. Control, Apr. 30, 2008) (Connecticut Timeline Order) available at</li>
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## CHAPTER 6 ENDNOTES

- [http://www.dpuc.state.ct.us/dockhist.nsf/8e6fc37a54110e3e852576190052b64d/69ccb9118f035bc38525755a005df44a/\\$FILE/070213-043008.doc](http://www.dpuc.state.ct.us/dockhist.nsf/8e6fc37a54110e3e852576190052b64d/69ccb9118f035bc38525755a005df44a/$FILE/070213-043008.doc) (90 days or 125 days when poles must be replaced).
- 23 See, e.g., Fibertech Comments in re NBP PN #12, filed July 21, 2009, Attach. (noting that since implementing timelines, in Connecticut it takes pole owners an average of 89 days to issue licenses and New York pole owners average 100 days for Fibertech's applications, compared to longer intervals elsewhere).
  - 24 See, e.g., Connecticut *Timeline Order*; New York *Timeline Order*; Utah Admin. Code § R746-345-3; Vermont Public Service Board, Rules 3.708; See also *Utility Pole Make-Ready Procedures*, Docket No. 07-02-13 (Conn. Dep't of Pub. Util. Control, 2008), available at <http://www.dpuc.state.ct.us/dockhist.nsf/8e6fc37a54110e3e852576190052b64d/69ccb9118f035bc38525755a005df44a?OpenD> ocmnt; Sunesys Comments in re National Broadband Plan NOI, filed June 8, 2009, at 6 ("By permitting pole owners to have an uncapped and unspecified period of time in which to issue a permit, many pole owners have caused tremendous delays in the process, thereby undermining broadband deployment."); Letter from Jacqueline McCarthy, Counsel, Broadband & Wireless Pole Attachment Coalition, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 07-245 (Feb. 23, 2009) at 1-5.
  - 25 Wireless providers assert that negotiations with pole owners to attach wireless devices "often face a period of years in negotiating pole agreements." PTIA—The Wireless Infrastructure Association & The DAS Forum Comments in re National Broadband Plan NOI, filed June 8, 2009, at 7. As telecommunications providers, wireless providers have the right to attach to poles under Section 224 of the Act to provide service.
  - 26 Letter from Joshua Seidemann, Vice President, Regulatory Affairs, ITTA, to Marlene H. Dortch, Secretary, FCC, WC Docket No. 07-245, RM-11293, WC 09-154 (Dec. 22, 2009) (ITTA Dec. 22, 2009 *Ex Parte*) at 3 (noting a pole attachment dispute pending before a state for five years before the parties settled).
  - 27 See 47 C.F.R. §§ 1.1404-1.1410 (pole attachment complaint procedures).
  - 28 See, e.g., ITTA Dec. 22, 2009 *Ex Parte* at 3 (noting that one provider alone deals with 600 separate entities and that the "lack of uniform rules, standards, and oversight makes negotiating reasonable attachment terms very difficult and extremely time consuming").
  - 29 FED. MINISTRY OF ECON. & TECH., GOV'T OF GERMANY, THE FEDERAL GOVERNMENT'S BROADBAND STRATEGY 12 (2009), available at <http://www.bmwi.de/English/Redaktion/Pdf/broadband-strategy,property=pdf,bereich=bmwi,spache=en,rwb=true.pdf>.
  - 30 For example, many pole owners utilize the National Joint Utilities Notification System (NJUNS) for maintaining and communicating data about their pole infrastructure. See generally National Joint Utilities Notification System—NJUNS, Inc., <http://www.njuns.com/NJUNS.Home/default.htm> (last visited Mar. 2, 2010).
  - 31 NCTA Comments in re Pole Attachments Petition, filed Sept. 24, 2009, App. B (Declaration of Dr. Michael D. Pelcovits) Attach. 2 (Methodology and Sources) at 1-3.
  - 32 Nineteen states and the District of Columbia (representing approximately 45% of the U.S. population) have exercised this type of "reverse preemption" and have certified that they directly regulate utility-owned infrastructure in their regions. See *Corrected List of States That Have Certified That They Regulate Pole Attachments*, WC Docket No. 07-245, Public Notice, 23 FCC Rcd 4878 (WCB 2008). Section 224(a)(1) expressly excludes poles owned by cooperatives from regulation, an exemption that dates back to 1978. According to the National Rural Electric Cooperative Association, electric co-operatives own approximately 42 million poles. Letter from David Predmore, National Rural Electric Cooperative Association, to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 09-47, 09-51, 09-137, WC Docket No. 09-245 (Feb. 26, 2010). The exclusion of co-operatives from Section 224 regulation may impede broadband deployment in rural areas. For instance, one small broadband cable company claims that it ceased offering service in two rural communities in Arkansas because of an increase in pole attachment rates by unregulated electric cooperatives that owned the poles in those communities. Letter from Bennett W. Hooks, Jr., Buford Media Group, LLC, to Bernadette McGuire-Rivera, Assoc. Adm'r, Office of Telecom. & Info. Admin., Dep't of Comm. (Apr. 13, 2009) at n.2, 3, available at <http://www.ntia.doc.gov/broadbandgrants/comments/79C5.pdf>.
  - 33 For a review of various approaches to state and local rights of way policies, see NTIA, STATE AND LOCAL RIGHTS OF WAY SUCCESS STORIES, available at <http://www.ntia.doc.gov/ntiahome/staterow/ROWstaterowstories.pdf>.
  - 34 In 2003, the NTIA compiled a comprehensive survey of state rights-of-way approaches that may be found at NTIA, Rights-of-Way Laws by State, <http://www.ntia.doc.gov/ntiahome/staterow/rowtableexcel.htm> (last visited Feb. 18, 2010). In 2002, the National Association of Regulatory Utility Commissions undertook a similar project and issued a comprehensive report. See NARUC, PROMOTING BROADBAND ACCESS THROUGH PUBLIC RIGHTS-OF-WAY AND PUBLIC LANDS (July 31, 2002).
  - 35 See, e.g., Level 3 Comments in re National Broadband Plan NOI, filed Jun. 8, 2009, at 19; Windstream Comments in re National Broadband Plan NOI, filed Jun. 8, 2009, at 2; Verizon Comments in re National Broadband Plan NOI, filed June 8, 2009, at 66; Qwest Comments in re National Broadband Plan NOI, filed June 8, 2009, at 27. Sunesys urges the FCC to "clarify the standards related to timely and reasonably priced access to necessary governmental rights of way." Sunesys Comments in re NBP PN #7 (*Comment Sought on the Contribution of Federal, State, Tribal, and Local Government to Broadband—NBP Public Notice #7*, GN Docket Nos. 09-47, 09-51, 09-137, Public Notice, 24 FCC Rcd 12110 (WCB 2009) (NBP PN #7)), filed Nov. 6, 2009, at 4.
  - 36 See, e.g., NATOA et al. Reply in re NBP PN #30, (Reply Comments Sought in Support of National Broadband Plan—NBP Public Notice #30, GN Docket Nos. 09-47, 09-51, 09-137, Public Notice 25 FCC Rcd 241 (2010) (NBP PN #30) filed Jan. 27, 2010, at 12-13; NATOA et al. Comments in re NBP PN #7, filed Nov. 7, 2009, at 46-47; City of New York Comments in re NBP PN #7, filed Nov. 6, 2009, at 8; City and County of San Francisco Comments in re NBP PN #7, filed Nov. 6, 2009, at 16-20. *But cf.* Dumont Jan. 8, 2010 *Ex Parte* at 2 (noting that "difficulties involved in negotiating and gaining access to the rights of way often prove to be the greatest impediment to the efficient, cost-effective, and timely deployment of broadband.");
  - 37 For example, the Broadband Principles adopted by the National Association of Telecommunications Officers and Advisors (NATOA), an organization for local government agencies, staff and public officials, states that "[t]he desired development of high capacity broadband networks and broadband services will require extensive collaboration among parties: local communities, regions, state governments, national government, the private sector, interest groups, and others." NATOA et al. Comments in re National Broadband Plan NOI, filed Jun. 8, 2009, at 3; see also Gary Gordier, CIO and IT Director, El Paso, Texas, Remarks at the FCC State and Local Government Workshop 161 (Sept. 1, 2009) ("There needs to be a lot better coordination across all jurisdictional levels to economize and share jointly in the infrastructure"), available at [http://www.broadband.gov/docs/ws\\_19\\_state\\_and\\_local.pdf](http://www.broadband.gov/docs/ws_19_state_and_local.pdf); Ray Baum, Comm'r, Oregon Pub. Util. Comm'n, Remarks at FCC State and Local Government Workshop 61 (Sept. 1, 2009) ("[W]e have a lot of infrastructure out there owned by utilities[,] both public and private[,] that sitting there that could be better utilized than it is today"); Lori Sherwood, Cable Adm'r, Howard County, Maryland, Remarks at the FCC State and Local Government Workshop 120 (Sept. 1, 2009) ("We have an opportunity to do this right and 25 years from now we don't want to say that we should have done a better job coordinating and talking to each other. For development of a national policy, the FCC should draw on its decade of government experiences including local governance.");
  - 38 See note 34, *supra*.
  - 39 See 47 U.S.C. § 253(c).
  - 40 A public record search by FCC Staff revealed that since passage of the 1996 Act, the FCC has taken an average of 661 days to resolve Section 253 disputes filed before it, and federal district court litigation of similar disputes has taken an average of 580 days to conclude. Disputes often extend further through review by courts of appeal, as well.
  - 41 See NATOA et al. Reply in re NBP PN #30, filed Jan. 27, 2010, at 38 (recommending that the FCC "consider creating a special task force" of rights-of-way experts that would "catalog federal, state, and local right-of-way practices and fees in an effort to identify and articulate existing best practices being employed by federal, state, and local authorities for different categories of public rights of way and infrastructure."). As proposed by NATOA, the task force "could also examine and report to the Commission regarding the advantages and disadvantages of alternative forms of compensation for use of public rights of way, and other rights of way related infrastructure, such as poles and conduits." *Id.* at 39.



## CHAPTER 6 ENDNOTES

- 42 See NATOA et al. Reply in re NBP PN #30, filed Jan. 27, 2010, at 38–39.
- 43 Memorandum on Improving Rights-of-Way Management Across Federal Lands to Spur Greater Broadband Deployment, 40 WKLY. COMP. PRES. DOC. 696 (May 3, 2004).
- 44 Memorandum on Facilitating Access to Federal Property for the Siting of Mobile Services Antennas, 31 WKLY. COMP. PRES. DOC. 1424 (Aug. 10, 1995).
- 45 See Letter from Thomas Cohen, Counsel for the Fiber to the Home Council, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 09-51 (Oct. 14, 2009).
- 46 “Splicing” includes splice kit, installation of splicing enclosure, and splicing of fiber. Splice kit is excluded from “materials” cost. Cost of construction in joint deployment case refers to construction of a single 1-mile, 2” conduit containing 216-count fiber, when coordinated with a road construction project. Additional costs reflect the same project independent of road construction. Letter from Matthew R. Johnson, Legal Fellow, NATOA, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 09-51 (Sept. 17, 2009) (attaching COLUMBIA TELECOMM. CORP. BRIEF ENGINEERING ASSESSMENT: EFFICIENCIES AVAILABLE THROUGH SIMULTANEOUS CONSTRUCTION AND CO-LOCATION OF COMMUNICATIONS CONDUIT AND FIBER tbls. 1, 2 (2009)).
- 47 Moratoria on re-opening streets for further telecommunications facilities could impede broadband deployment in certain circumstances.
- 48 DEP’T OF PUBLIC WORKS, CITY AND COUNTY OF SAN FRANCISCO, ORDER NO. 176,707 (RVSD): REGULATIONS FOR EXCAVATING AND RESTORING STREETS IN SAN FRANCISCO § 5 (Mar. 26, 2007), available at [http://www.sfgov.org/site/uploadedfiles/sfdpw/bsm/sccc/DPW\\_Order\\_176-707.pdf](http://www.sfgov.org/site/uploadedfiles/sfdpw/bsm/sccc/DPW_Order_176-707.pdf); see also City and County of San Francisco Department of Public Works, Coordinating Street Construction, [http://www.sfgov.org/site/sfdpw\\_page.asp?id=32429](http://www.sfgov.org/site/sfdpw_page.asp?id=32429) (last visited Jan. 4, 2010).
- 49 Pub. Improvement Comm’n, City of Boston, Policy Relating to Grants of Location for New Conduit Network for the Provision of Commercial Telecommunications Services (Aug. 4, 1988), as amended.
- 50 Hardik V. Bhatt, CIO, City of Chicago, Remarks at FCC State and Local Governments: Toolkits and Best Practices Workshop (Sept. 1, 2009), available at [http://www.broadband.gov/docs/ws\\_19\\_state\\_and\\_local.pdf](http://www.broadband.gov/docs/ws_19_state_and_local.pdf); see also *id.* at 94 (“we have now started knowing every time a street gets dug up either for putting in a traffic signal interconnect, or putting some street light interconnects, or maybe a private utility has dug up the street, we have an opportunity to see if we could leverage that digging up of the street and maybe put conduit or if conduit is there to put fiber there”).
- 51 Gordon Cook, *Amsterdam’s Huge FTTH Build*, BROADBAND PROPERTIES, Sept. 2006, at 68.
- 52 NATOA et al. Comments in re NBP PN #7, filed Nov. 9, 2009, App. at 14.
- 53 Dumont Jan. 8, 2010 *Ex Parte* at 3.
- 54 Dumont Jan. 8, 2010 *Ex Parte* at 4 (recommending “a mechanism to ensure that all U.S. Department of Transportation projects are deploying conduit, and that space is created for four cables”).
- 55 Dumont Jan. 8, 2010 *Ex Parte*.
- 56 United States Department of the Interior, National Atlas of the United States, <http://www.nationalatlas.gov/printable/fedlands.html> (last visited Jan. 7, 2010).
- 57 General Services Administration, GSA Properties Overview, [http://www.gsa.gov/Portal/gsa/ep/contentView.do?contentType=GSA\\_OVERVIEW&contentId=8513](http://www.gsa.gov/Portal/gsa/ep/contentView.do?contentType=GSA_OVERVIEW&contentId=8513) (last visited Jan. 7, 2010).
- 58 Memorandum on Facilitating Access to Federal Property for the Siting of Mobile Services Antennas, 31 WEEKLY COMP. PRES. DOC. 1424 (Aug. 10, 1995).
- 59 See Siting Antennas on Federal Property, 41 C.F.R. §§ 102-79.70–100.
- 60 GSA, *GSA’s National Antenna Program Wins Vice President Al Gore’s Hammer Award Agency’s National Antenna Program Fosters Innovation and Saves Tax Dollars, Showing Government Can Work Better and Cost Less*, GSA #9552 (press release), Jan. 13, 1999 (GSA, *GSA’s National Antenna Program*), [http://www.gsa.gov/Portal/gsa/ep/contentView.do?contentType=GSA\\_BASIC&contentId=9125](http://www.gsa.gov/Portal/gsa/ep/contentView.do?contentType=GSA_BASIC&contentId=9125).
- 61 GSA, *GSA’s National Antenna Program*. These facts have been confirmed via follow-up e-mails and conversations with GSA.
- 62 NTIA, IMPROVING RIGHTS-OF-WAY MANAGEMENT ACROSS FEDERAL LANDS: A ROADMAP FOR GREATER BROADBAND DEPLOYMENT 31–33, available at <http://www.ntia.doc.gov/reports/fedrow/frowreport> (discussing applicable statutes and agency procedures). For example, the Federal Land Policy Management Act of 1976, which applies to the Department of Interior Bureau of Land Management and National Forest Service, requires that “fair market value, as determined by the Secretary.” 43 U.S.C. § 1764(g). In addition, OMB Circular A-25 (rvsd), § 6(a)(2)(b) requires that agencies assess “user charges based on market prices,” although exceptions can be granted.

Before the  
Federal Communications Commission  
Washington, D.C. 20554

In the Matter of )  
 )  
Protecting and Promoting the Open Internet ) GN Docket No. 14-28  
 )

**REPORT AND ORDER ON REMAND, DECLARATORY RULING, AND ORDER**

**Adopted: February 26, 2015**

**Released: March 12, 2015**

By the Commission: Chairman Wheeler and Commissioners Clyburn and Rosenworcel issuing separate statements; Commissioners Pai and O'Rielly dissenting and issuing separate statements.

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## I. INTRODUCTION

1. The open Internet drives the American economy and serves, every day, as a critical tool for America's citizens to conduct commerce, communicate, educate, entertain, and engage in the world around them. The benefits of an open Internet are undisputed. But it must remain open: open for commerce, innovation, and speech; open for consumers and for the innovation created by applications developers and content companies; and open for expansion and investment by America's broadband providers. For over a decade, the Commission has been committed to protecting and promoting an open Internet.

2. Four years ago, the Commission adopted open Internet rules to protect and promote the "virtuous cycle" that drives innovation and investment on the Internet—both at the "edges" of the network, as well as in the network itself. In the years that those rules were in place, significant investment and groundbreaking innovation continued to define the broadband marketplace. For example, according to US Telecom, broadband providers invested \$212 billion in the three years following adoption of the rules—from 2011 to 2013—more than in any three year period since 2002.

3. Likewise, innovation at the edge moves forward unabated. For example, 2010 was the first year that the majority of Netflix customers received their video content via online streaming rather than via DVDs in red envelopes. Today, Netflix sends the most peak downstream traffic in North America of any company. Other innovative service providers have experienced extraordinary growth—Etsy reports that it has grown from \$314 million in merchandise sales in 2010 to \$1.35 billion in merchandise sales in 2013. And, just as importantly, new kinds of innovative businesses are busy being born. In the video space alone, in just the last sixth months, CBS and HBO have announced new plans for streaming their content free of cable subscriptions; DISH has launched a new package of channels that includes ESPN, and Sony is not far behind; and Discovery Communications founder John Hendricks has announced a new over-the-top service providing bandwidth-intensive programming. This year, Amazon took home two Golden Globes for its new series "Transparent."

4. The lesson of this period, and the overwhelming consensus on the record, is that carefully-tailored rules to protect Internet openness will allow investment and innovation to continue to flourish. Consistent with that experience and the record built in this proceeding, today we adopt carefully-tailored rules that would prevent specific practices we know are harmful to Internet openness—blocking, throttling, and paid prioritization—as well as a strong standard of conduct designed to prevent the deployment of new practices that would harm Internet openness. We also enhance our transparency rule to ensure that consumers are fully informed as to whether the services they purchase are delivering what they expect.

5. Carefully-tailored rules need a strong legal foundation to survive and thrive. Today, we provide that foundation by grounding our open Internet rules in multiple sources of legal authority—including both section 706 of the Telecommunications Act and Title II of the Communications Act. Moreover, we concurrently exercise the Commission's forbearance authority to forbear from application of 27 provisions of Title II of the Communications Act, and over 700 Commission rules and regulations. This is a Title II tailored for the 21<sup>st</sup> century, and consistent with the "light-touch" regulatory framework that has facilitated the tremendous investment and innovation on the Internet. We expressly eschew the future use of prescriptive, industry-wide rate regulation. Under this approach, consumers can continue to

c. Access to Poles, Ducts, Conduit and Rights-of-Way (Section 224)

478. Consistent with the recommendations of certain broadband provider commenters, because we find that the section 10(a) criteria are not met, we decline to forbear from applying section 224 and the Commission's associated rules with respect to broadband Internet access service.<sup>1444</sup> Section 224 of the Act governs the Commission's regulation of pole attachments. The Commission has recognized repeatedly the importance of pole attachments to the deployment of communications networks, and we thus conclude that applying these provisions will help ensure just and reasonable rates for broadband Internet access service by continuing pole access and thereby limiting the input costs that broadband providers otherwise would need to incur.<sup>1445</sup> Leveling the pole attachment playing field for new entrants that offer solely broadband services also removes barriers to deployment and fosters additional broadband competition.<sup>1446</sup> For similar reasons we find that applying these provisions will protect consumers and advance the public interest under sections 10(a)(2) and (a)(3).<sup>1447</sup>

479. Further, in significant part, section 224 imposes obligations on utilities, as owners of poles, ducts, conduits, or rights-of-way, to ensure that cable operators and telecommunications carriers obtain access to poles on just, reasonable, and nondiscriminatory rates, terms and conditions.<sup>1448</sup> The definition of a utility, however, includes entities other than telecommunications carriers,<sup>1449</sup> and pole attachments themselves are not "telecommunications services." Section 10 allows the Commission to forbear from statutory requirements and implementing regulations as applied to "a telecommunications

(Continued from previous page)

on such providers by virtue of this Order, given our decision not to forbear from application of section 255 and its implementing regulations.

<sup>1444</sup> See, e.g., Comcast Dec. 24, 2014 *Ex Parte* Letter at 25 n.107; NCTA Dec. 23, 2014 *Ex Parte* Letter at 21. See also, e.g., Letter from Marvin Ammori and Julie Samuels, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 14-28 at 1 (filed Nov. 12, 2014) ("Title II forbearance should be implemented in such a way so as to encourage continued deployment and investment in networks by for example preserving pole attachment rights."); Letter from Austin C. Schlick, Director, Communications Law, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 14-28 at 3-4 (filed Dec. 30, 2014) (Google Dec. 30, 2014 *Ex Parte* Letter).

<sup>1445</sup> See, e.g., *Implementation of Section 224 of the Act, A National Broadband Plan for Our Future*, WC Docket No. 07-245, GN Docket No. 09-51, Report and Order and Order on Reconsideration, 26 FCC Rcd 5240, 5241-43, paras. 1-6 (2011) (*2011 Pole Attachment Order*). See also, e.g., Google Dec. 30, 2014 *Ex Parte* Letter at 3-4; Vonage Jan. 7, 2015 *Ex Parte* Letter at 1.

<sup>1446</sup> See, e.g., Google Dec. 30, 2014 *Ex Parte* Letter at 3-4; Letter from Stephen E. Coran, Counsel for WISPA, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 14-28 at 13-14 (filed Feb. 3, 2015).

<sup>1447</sup> Some commenters contend that the Commission should forbear from all of Title II based on generalized arguments about the marketplace, such as past network investment or changes in performance or price per megabit in the recent past. See, e.g., ACA Jan. 12, 2015 *Ex Parte* Letter at 10-11; Comcast Dec. 24, 2014 *Ex Parte* Letter at 4-6; NCTA Dec. 23, 2014 *Ex Parte* Letter at 19-20. We are not persuaded that those arguments justify a different outcome regarding section 224 and our associated rules, both for the reasons discussed previously, see *supra* Section V.B.1, and because commenters do not meaningfully explain how these arguments impact the section 10 analysis here, given that the need for regulated access to access to poles, ducts, conduit, and rights-of-way is not self-evidently linked to such marketplace considerations. Nor does the record reveal that concerns about adequate access to poles, ducts, conduit and rights-of-way are limited to broadband providers of a particular size, and we thus are not persuaded that these concerns would differ in the case of small broadband providers, for example. See, e.g., ACA Jan. 12, 2015 *Ex Parte* Letter at 11; AIREBeam Jan. 30, 2015 *Ex Parte* Letter at 2.

<sup>1448</sup> 47 U.S.C. § 224(a)-(e).

<sup>1449</sup> See 47 U.S.C. § 224(a)(1) (defining a utility as "any person who is a local exchange carrier or an electric, gas, water, steam, or other public utility, and who owns or controls poles, ducts, conduits, or rights-of-way used, in whole or in part, for any wire communications. . . ."); see also 47 U.S.C. § 224(a)(5) ("For purposes of this section, the term 'telecommunications carrier' (as defined in section 153 of this title) does not include any incumbent local exchange carrier as defined in section 251(h) of this title.").



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# Infrastructure Month at the FCC

March 30, 2017 - 2:20 pm

By [Ajit Pai](#) | FCC Chairman

I recently watched the 1985 classic "Back to the Future." At the end of the movie, Marty McFly warns Dr. Emmett Brown as they prepare to head into the future, "Hey Doc, we better back up. We don't have enough road to get up to 88." Dr. Brown replies, "Roads? Where we're going, we don't need roads."

It turns out that Dr. Brown was wrong; in 2017, we still need roads. But even more, what paves the way in the 21st century is high-speed Internet access, or broadband. That's certainly what we believe here at the FCC. And that's why our goal is to make sure that every American can get faster, cheaper, and better broadband.

Next-generation networks are **hard to build**. It takes a lot of money and effort to lay fiber, install wireless infrastructure, build satellite earth stations, and more. It also requires a reasonably certain business case for deployment, which is all too often hard to prove in parts of the country with sparse population and/or lower incomes.

But the benefits of doing so are tremendous. Infrastructure investment is critical to closing the digital divide in our country and bringing high-speed Internet access to more rural Americans. Broadband has also made many sectors of the economy more productive, from shipping to energy. And it's has given birth to entirely new industries, like the mobile apps economy, telemedicine, online education, and the nascent Internet of Things.

To bring the benefits of the digital age to all Americans, the FCC needs to make it easier for companies to build and expand broadband networks. We need to reduce the cost of broadband deployment, and we need to eliminate unnecessary rules that slow down or deter deployment. At next month's Commission meeting on April 20, the FCC will be voting on a number of proposals to do just that. That's why we are calling April "Infrastructure Month" at the FCC.

**1. Wired Infrastructure.** — In one set of proposals, I'm asking my colleagues to support rules that would facilitate the construction of wired networks. For example, attaching Internet-related equipment to utility poles is a major cost element for companies of all sizes. We'll seek to both lower costs for and speed deployment of this equipment. I'm also proposing rules to allow companies to speed the retirement of legacy copper networks, some of which were installed many decades ago, and expedite the transition to newer, more resilient, higher-capacity fiber-based networks and services. After all,



every dollar spent maintaining the fading networks of yesterday is a dollar that can't be spent building the networks of tomorrow. Finally, I am teeing up questions about whether state and local regulations are stifling network deployment and whether the FCC should consider using its authority to preempt any unnecessary regulatory roadblocks.

*2. Wireless Infrastructure.* — Next, the Commission will focus on the wireless side of the equation. The wireless networks of the future will look very different. Instead of tall towers you can see from a mile away, there will be small cells — wireless access points you might not even see and/or could hold in your hands. With this "densification" of so-called 5G networks, we'll need to deploy millions of small cells in order to realize the promise of multi-gigabit connectivity through millimeter-wave technology. That's why I'm advancing proposals to make it easier for the private sector to build these "5G" networks. We'll aim to expedite state and local approval of infrastructure deployment applications and streamline our own rules to account for these new networks. Regulations designed for big towers don't necessarily make sense for small cells. So we need to modernize our rules to keep up with technology.

*3. Business Data Services.* — Speaking of modernizing our rules that affect infrastructure investment, next month we'll also vote on new rules to update the rules for business data services (BDS), otherwise known as "special access." BDS involves network connections used by businesses, non-profits, and government institutions to securely move large amounts of data. ATM withdrawals and credit card transactions are examples of how we rely on these services.

Twelve years ago, the Commission began to study the business data services market to see if changing market conditions warranted changes to our rules. At long last, the time for action has arrived. I'm proposing that we take a balanced approach to reforming the rules governing this marketplace. The extensive record compiled by the Commission's excellent staff shows substantial and growing competition in many areas of the country, thanks to new market entrants like cable companies. Where this competition exists, we will relax unnecessary regulation, thereby creating greater incentives for the private sector to invest in next-generation networks. But where competition is still lacking, we'll preserve regulations necessary to prevent anti-competitive price increases.

*4. Facilitating Rural Deployment.* — As I mentioned earlier, there are some parts of this country, primarily rural America, where the business case for broadband deployment is very difficult, and the private sector lacks the economic incentives to build out next-generation networks no matter how many regulatory barriers the Commission removes. For those areas that are the most expensive to serve, the Commission provides direct support to companies through the Universal Service Fund (USF). The USF's high-cost program subsidizes broadband deployment for small carriers. I am proposing that we tweak one of the rules for that program to make sure that some rural households that could be served by these carriers are not left stranded without broadband service.

While infrastructure will be the focus of the Commission's April meeting, it won't be the only subject we're addressing. If we're majoring in infrastructure next month, you could say that we're minoring in media, with three items on the agenda.

*5. Easing Burdens on Noncommercial Stations.* — Recently, the FCC adopted a rule requiring officers and members of boards of directors of noncommercial educational (NCE) broadcaster stations to provide personal information to the FCC. However, public television and radio stations have complained that this rule is discouraging volunteers from serving in these positions. In my view, we should be thanking people who want to serve their community in this way, not imposing unnecessary regulatory burdens upon them. So next month, we'll be voting to eliminate this rule.

*6. Allowing Broadcasters to Raise Funds for Charity.* — We will also consider giving NCE broadcasters more flexibility to raise money for disaster relief groups, charities, and other non-profit organizations. In the past, the FCC has granted waivers to allow NCE television and radio stations to solicit donations for causes such as Hurricane Katrina and Haitian earthquake relief. I believe that we should make it easier for stations to engage in this type of activity so long as it doesn't



compromise their non-commercial nature. That's why I'm proposing that stations be allowed to devote no more than 1% of their total annual airtime to fundraising for non-profit organizations. Moreover, because certain stations have indicated that they have no interest in engaging in such activity, this rule change would not apply to stations funded by the Corporation for Public Broadcasting.

*7. UHF Discount.* — Finally, we'll consider whether to restore the so-called Ultra-High Frequency, or UHF discount, which is related to the Commission's national television ownership cap. Last September, the FCC voted to eliminate the discount on a party-line vote. That decision has been challenged in the U.S. Court of Appeals for the D.C. Circuit. In [my view](#), the FCC is likely to lose that litigation because it went about eliminating the UHF discount in the wrong way. So I'm proposing that we hit the reset button, returning the rule to the way it was up until last fall. And then we'll launch a comprehensive review of the national ownership cap, including the UHF discount, later this year.

\*\*\*

Keeping with recent trends, the FCC's April meeting will be a busy one. But it'll be an important one — Infrastructure Month will present several chances for the FCC to promote deployment and benefit consumers across America. Infrastructure might not be as flashy as a flux capacitor, but it'll be a 1.21 gigawatt jolt for the digital economy.

**Tags:**

[Communications Infrastructure](#) - [FCC Management & Policies](#) - [Spectrum](#) - [UHF and VHF](#)

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# **State Broadband Plan Progress Report**



*Information Technology*

**Joint Legislative Oversight Committee on Information  
Technology and the Fiscal Research Division**

Department of Information Technology

December 1, 2015

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## Legislative Request

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This report is submitted pursuant to H97, Session Law 2015-241, which directed the State CIO to provide a report to the Joint Legislative Oversight Committee on Information Technology and the Fiscal Research Division on the development and implementation of the State broadband plan ("plan").

The full text of the legislation can be found in Appendix A.



## Introduction

The State Chief Information Officer established the Broadband Infrastructure Office in 2015 as a statewide resource for broadband access, first responder communications, and classroom connectivity initiatives led by the State of North Carolina. In accordance with Session Law 2015-241, H97, the Broadband Infrastructure Office will develop a State broadband plan and will coordinate with other State agencies in order to maximize the effectiveness and efficiency of available resources.

The Broadband Infrastructure Office aligns NC Broadband, the statewide effort to expand high-speed Internet access, with the FirstNet public safety initiative for improved resource sharing across state agencies. The centralized and streamlined Office provides the opportunity to work across agencies and identify infrastructure development needs across North Carolina.

The Office's mission includes creating the nation's first giga-state by 2020, expanding broadband access to underserved communities, and supporting digital learning by extending Wi-Fi access to every classroom in the State. We also provide policy recommendations and guidance to government leaders and key stakeholders to foster digital infrastructure expansion, adoption, and use.

## DIGITAL INFRASTRUCTURE KEY OBJECTIVES FOR 2015



### STATE BROADBAND PLAN

Develop a guiding document intended to inform policy makers as they create, implement and impact policies on the deployment, adoption and use of digital infrastructure and broadband enhance economic development, education, public safety and government efficiency.



### COMMUNITY DEVELOPMENT

Develop and provide a County Index Rating tool to identify areas of need based on infrastructure, adoption rates and community readiness. Research, inform & assist communities through established grant programs, relationships with federal and NGOs or private foundations, & finding or creating grant opportunities for a 'last mile' pilot.



### STATE AGENCY COORDINATION

Lead a state multi-agency planning group- NC Broadband Interagency Group (NCBIG) a multi-agency effort to align technology infrastructure goals among the cabinet and other agencies.



### ADOPTION INITIATIVES

Analyze and develop recommendations to incite and increase adoption with the idea that if they demand it, it will come.



## Current Work

In May 2015, the Broadband Infrastructure Office (BIO) released the NC LITE-Up (North Carolina Linking the Internet to Economically Underprivileged People), an 18-month research study designed to better understand Internet adoption barriers in low-income households. BIO will use the findings from this unique study, in part, to help with the development of the comprehensive statewide plan that will address broadband issues including adoption.

In August 2015, the Broadband Infrastructure Office conducted an online survey to better understand the challenges that impact continued deployment of broadband infrastructure and adoption of broadband technology in the State. The survey received more than 500 stakeholder responses, a response rate of almost 20 percent, from a diverse sample representing a mixture of populations and counties. We received at least one response from all 100 counties. The results of this survey provide a current catalogue of the challenges the state faces to achieving universal connectivity and adoption. These challenges will be presented to small working groups of stakeholders and experts that will help identify recommendations to be included in the state broadband plan.



## BROADBAND SURVEY

- Respondents rated the following issues as most important:
  - Expanding access, particularly for K-12 students
  - Increasing adoption/digital literacy of citizens
  - Developing statewide policies that enhance access
- Key challenges associated with these issues include:

K-12 Home Access	Digitally Literate Workforce	Leverage Infrastructure
<ul style="list-style-type: none"><li>• Low population density</li></ul>	<ul style="list-style-type: none"><li>• Awareness of digital literacy training programs</li></ul>	<ul style="list-style-type: none"><li>• Clarity of existing policies for easements/tower access</li></ul>
<ul style="list-style-type: none"><li>• Infrastructure cost</li></ul>	<ul style="list-style-type: none"><li>• Awareness of how digital literacy impacts employment</li></ul>	<ul style="list-style-type: none"><li>• Tower owners' willingness to work together</li></ul>



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BIO continues to actively reach out to State agencies to look for opportunities to utilize existing infrastructure and resources and identify ways to streamline permitting and approval processes. Working with the Departments of Transportation, Administration, Commerce, and Department of Public Safety we continue to look for and find assets, resources and opportunities to increase high-speed broadband access and adoption throughout the State.



We are developing a broadband index to rate each county based on availability, adoption and community readiness. This index, similar to a rating tool, will inform the plan and assist our office in determining which challenges and which solutions may be needed for individual counties. The data sets used to develop the index include current NTIA and FCC coverage maps, potentially FCC subscription data, state Citizen Surveys, the BIO stakeholder survey, and community engagement.

BIO is developing an on-line, interactive toolkit, to leverage our information, resources, and on-the-ground technical assistance advisors to help communities with planning. This toolkit will work in conjunction with the Index and the Plan.

Finally, we continue to work closely with more than a dozen counties and communities to provide technical and community planning assistance. This work includes developing goals, aggregating demand, developing asset surveys, and identifying funding sources. The technical assistance team also engages with Internet service providers to highlight unserved or underserved communities, work through technical solutions, and provide guidance on locating community-owned assets available to reduce capital costs. These efforts have resulted in bringing broadband for the first time to communities around the state, including most recently: Yancey, Mitchell, Polk, Graham, and McDowell Counties. Projects continue in various counties throughout the central and eastern parts of the state.

## Early Findings

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The story of broadband infrastructure in North Carolina is a good news story for most of the state. Many communities, typically in sparsely populated or economically distressed areas, however, continue to find themselves on the wrong side of the digital divide. The plan will focus on bridging this divide as well as positioning the state for the future.

Today, North Carolina boasts many unique broadband assets. The state is home to a non-profit middle-mile network connecting universities, schools, hospitals and libraries among other institutions. Several large cable and telecom companies such as Time Warner, AT&T, CenturyLink and Frontier, provide Internet connections to millions of residents. Google Fiber announced at the beginning of the year plans to offer service in the Charlotte and Triangle areas. Many mid-to-small providers, including NorthState, Carolina West Wireless, Pangaea, Wilkes, Greenlight, and others, have established themselves in less populated markets. All of our K-12 schools are connected to fiber and every classroom will be equipped for WiFi connectivity by 2018. The tele-health market continues to see success and expand.

The State broadband plan will offer policy and planning recommendations that will leverage these assets to ensure universal access and connectivity. The speed at which technology evolves and the projected amount of data to be transferred in the near future will require significant infrastructure upgrades in our state. While almost 90 percent of the state has availability to the FCC threshold speeds of 25Mbps download/3 Mbps upload, less than 10 percent of the households have fiber to

the home. Most of the investments to upgrade infrastructure and expand cell or WiFi connectivity are taking place in urban areas. To continue to be a hub for technology and biotechnology innovation and to continue to attract manufacturing, knowledge-based businesses and improve our agricultural output, we will need to focus on upgrading existing infrastructure and investing in fiber and high-speed wireless infrastructure in the remote or sparsely populated areas of the state.

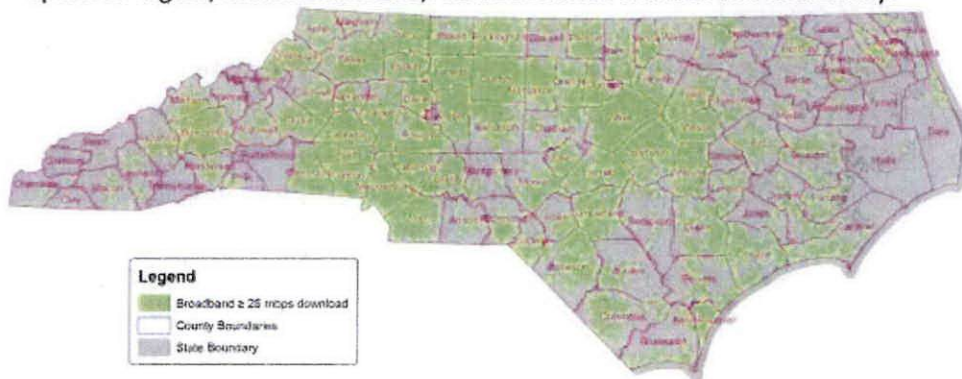
North Carolina leads the nation in many of the broadband categories mentioned above. Therefore, this plan will use data, stakeholder feedback, and experts to hone in on the most difficult challenges facing the state. For example, our research shows that despite availability, many communities are not adopting or utilizing high-speed Internet. We know increased adoption will drive the need for next-gen infrastructure. We have also found that community readiness or initiative, particularly in sparsely populated area, distinguishes those that have access to broadband and those that do not. The plan will address each of these challenges and offer recommendations to the General Assembly, local leaders and policy makers to overcome these challenges.

#### Availability: Broadband Deployment and Existing Infrastructure

In January 2015, the FCC updated the recommended “availability” target speed threshold to 25Mbps (download)/3Mbps (upload) from the previous recommended benchmark 4Mbps (download)/1Mbps (upload).

### ≥ 25 mbps download

An estimated 92.3% of households statewide have broadband available at this speed or higher, which leaves 289,751 households without this availability.



Source: NC Broadband, 2014

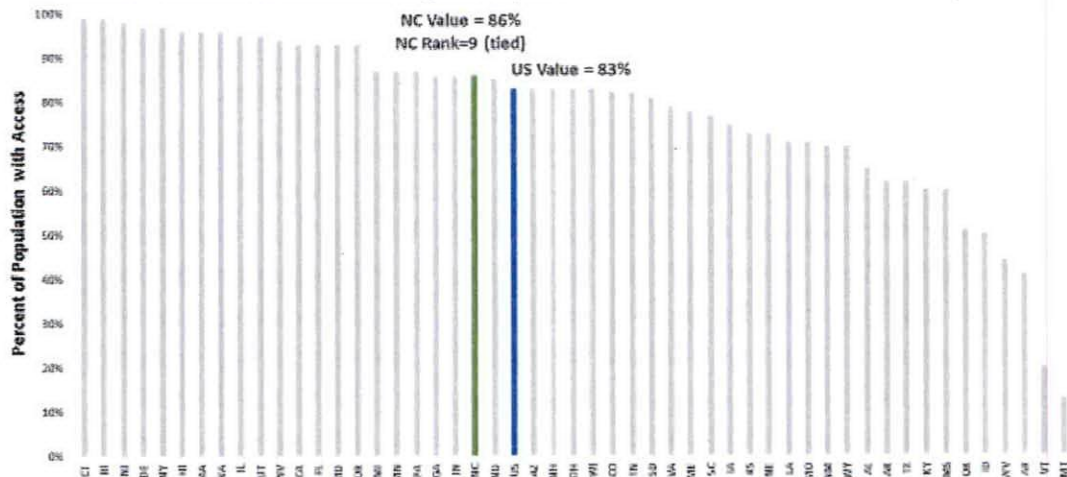
At the speed examined, North Carolina ranks 9th in the nation in terms of broadband deployment rate. Specifically, at 86 percent, North Carolina’s broadband deployment rate is slightly above the U.S. average (83 percent), 13 percentage points behind the most covered state, Connecticut, and is



85 percent of the value of the highest-ranking state (Rhode Island), and is below that of all the comparison states except Colorado and Virginia.

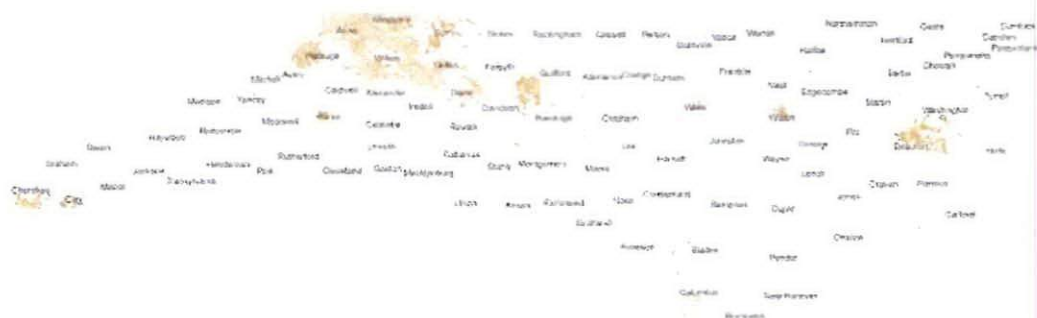
**Percent of Population with Broadband Access (Deployment Rate) at 25 Mbps/3 Mbps or Faster, All U.S. States, 2013**

Source: FCC 2015 Broadband Progress Report



North Carolina ranks considerably lower, however, on fiber deployment. While fiber-to-the-home deployment has nearly tripled since 2013's Innovation Index to 9.3 percent from 3.9 percent, North Carolina's rank, 37th, remains lower than all peer states and is significantly less than the US average fiber-to-the-home deployment—24.96 percent.

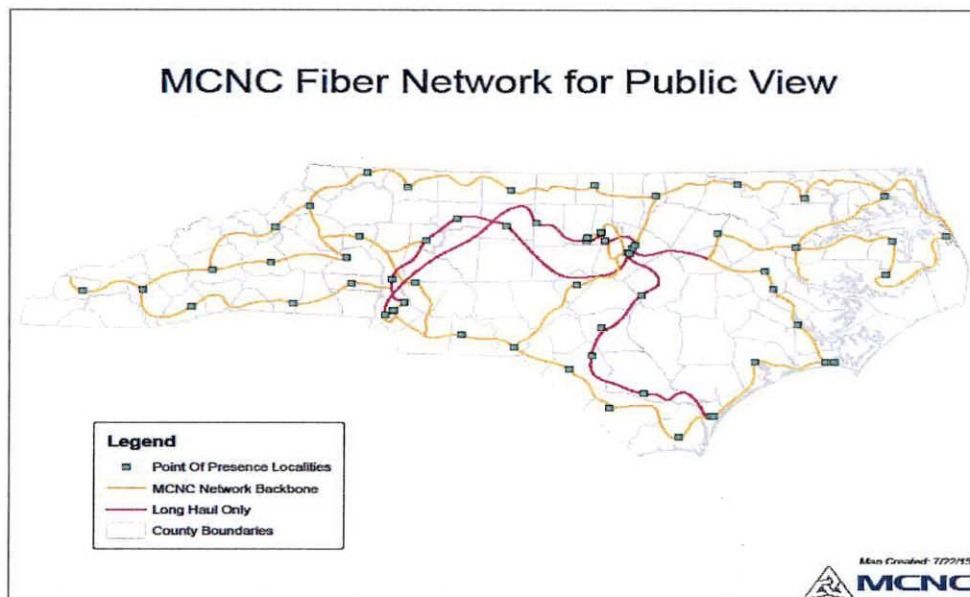
## NC Broadband Data Fall 2014



## Fiber Coverage

North Carolina's adoption rate, 10 percent at the examined speed threshold, has increased from the 1.6 percent rate reported in the previous report in spite of the increase in speed threshold. However, North Carolina ranks 22nd out of 25—a lower rank than all peer states. Within North Carolina, 58 of the 100 counties have a household broadband deployment rate at the download speed examined, equal to or above the US average of 83 percent. Of the 42 North Carolina counties below the U.S. average, 19 have a deployment rate between 50 and 82 percent, and the remaining 26 counties have a deployment rate of less than 50 percent.

While standard metrics for middle-mile are difficult to obtain, North Carolina's major broadband providers do have significant middle-mile assets. In addition, North Carolina possesses a 2,600 mile long, contiguous open access middle-mile network that touches 82 of North Carolina's 100 counties. Operated by the nonprofit, MCNC, the dark fiber (fiber that is not being used) shares the conduit with a lit fiber optic backbone that serves the broadband needs of all K–20 public education institutions, most of K–20 private education and select research institutes, nonprofit healthcare providers, public safety and other anchor institutions. Almost half the strands of fiber are also available to broadband service providers to lease and serve consumers and businesses. Enterprises across all vertical markets (financial services, technology, healthcare, biotech, transportation, logistics, etc.) can also lease the fiber strands to build their own enterprise networks.



## Adoption

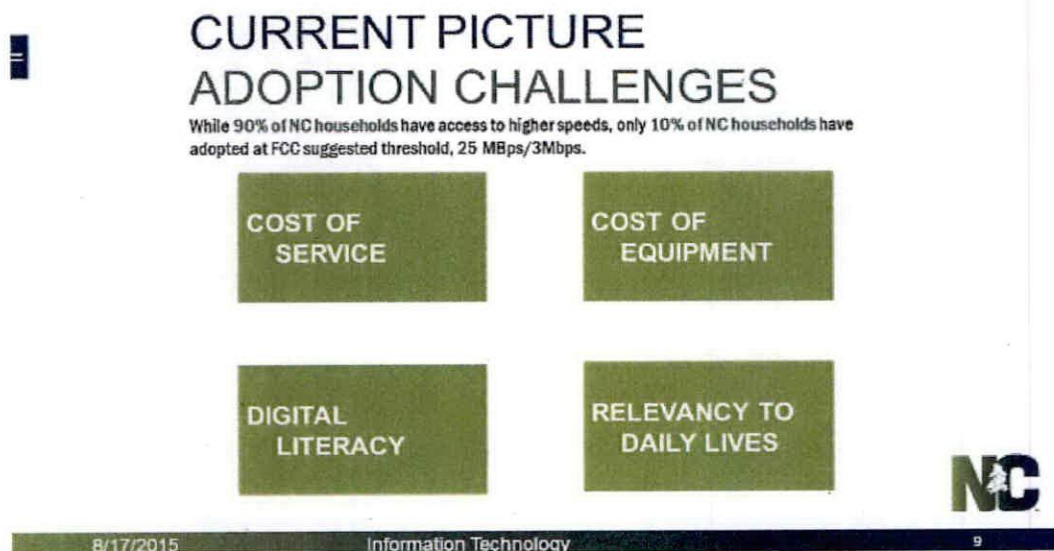
While there is a continued need for access to high-speed Internet and infrastructure expansion, Broadband adoption in NC is lower than it should be given connectivity access across the state. While more than 90% of NC households have access to higher speeds, only 10% of NC households



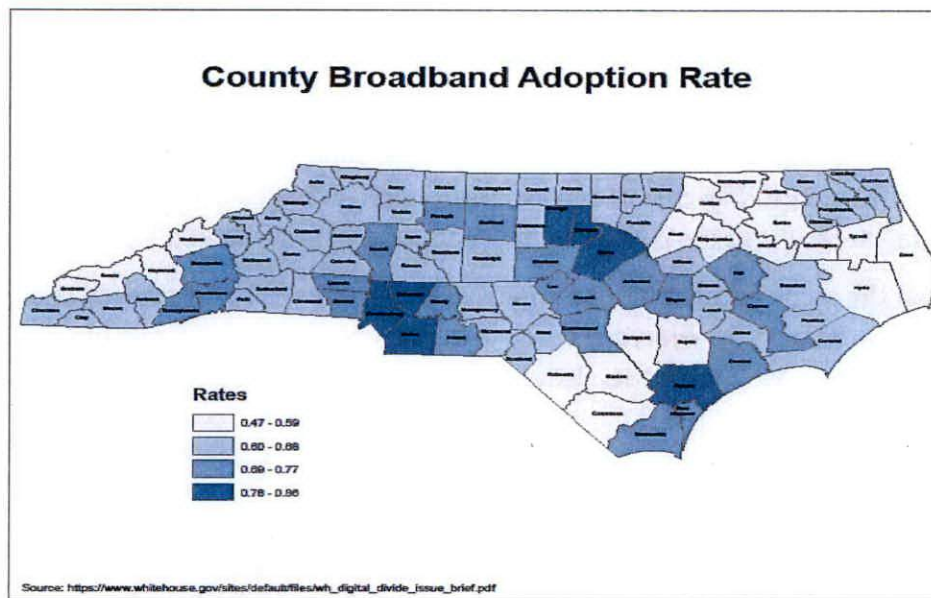
have adopted at Federal Communication Commission (FCC) suggested threshold, 25Mbps (download)/3Mbps (upload). Adoption is particularly low among low-income households. In 2013 only 47% of NC households with annual incomes under \$15,000 adopted broadband.

We know there are four main barriers influencing broadband adoption, particularly among low-income households, including cost of service, real or perceived costs of computer, laptop or other devices, digital literacy, and the perceived relevancy of the Internet on daily lives.

Participants in the study became more fully active digital citizens and improved their digital literacy and broadband utilization for everyday casts. Once the connectivity was established, 85% of participants signed up for Internet services and 79% continued service after the study's subsidies ended.



Early research shows that as a State, we need to focus on increasing adoption rates. This is especially true in areas where we have found significant broadband infrastructure, including fiber, but low utilization. Aside from the economic barriers discussed above, we are finding that large numbers of certain populations, like the elderly, do not use the Internet. Often these groups do not see the benefits of being on-line. Therefore, digital learning and increased education of the services, such as telehealth, and benefits, such as driver's license renewal, are needed.



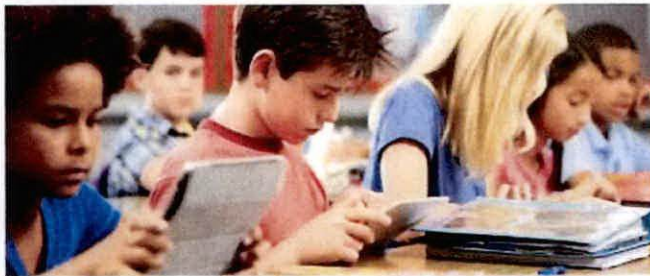
## Identifying Challenges

The broadband survey issued to stakeholders across the state was intended to identify challenges to broadband deployment and adoption in NC. Respondents to the survey were asked to rate their opinion on the importance of specific broadband issues, such as “expanding access to broadband in NC.” Secondly, respondents were asked to rate the extent to which they agreed that certain factors posed a challenge to resolving availability and adoption issues. For example, respondents rated the extent to which they agree that “The cost to deploy broadband infrastructure” affects connectivity using a 5-point scale.

Respondents rated expanding access, particularly for K-12 students, increasing adoption/digital literacy of citizens, developing statewide policies that enhance access as the most important issues. The survey also identified some key challenges associated with the issues, including K-12 home access, having a digitally literate workforce, and the need to leverage existing infrastructure.



## SUPPORTING EDUCATION FCC E-RATE PROGRAM



IMPROVING DIGITAL LEARNING  
CONNECTING EVERY CLASSROOM

More than \$23 million to expand Wi-Fi access to K-12 classrooms throughout the state, bringing the total funding for this initiative to nearly \$40 million

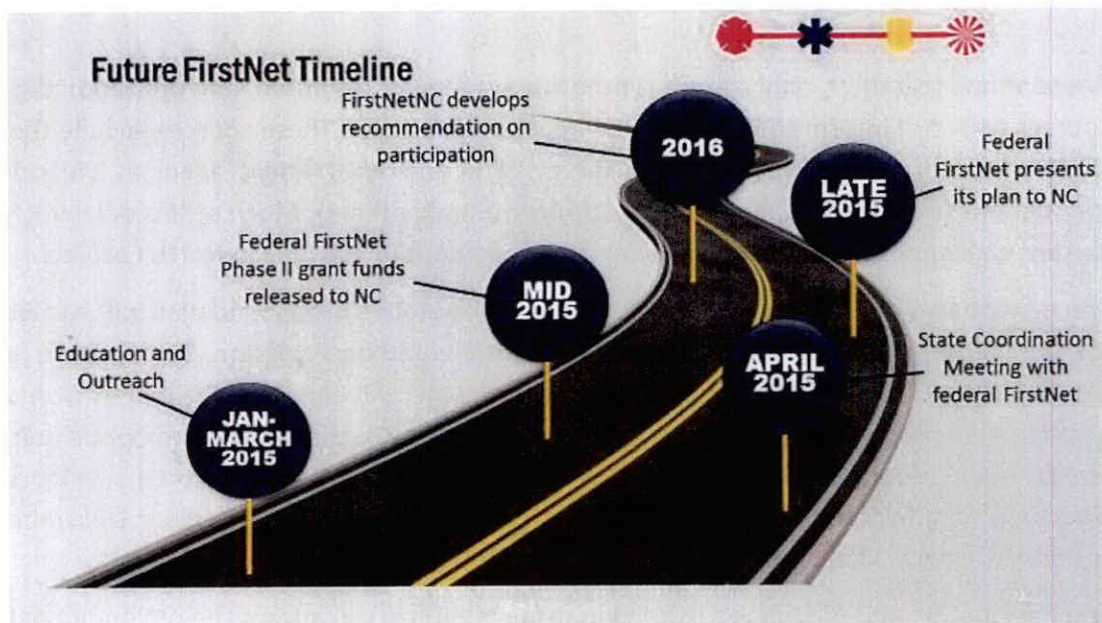


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The plan will also incorporate aspects of the national wireless data network, FirstNet. The FirstNet initiative for North Carolina, located within BIO, compliments and aids the work on the plan. We have worked with the federal FirstNet team to contemplate the use of the FirstNet network (with the objective of 100 percent coverage) by secondary users when not occupied by public safety or emergency responders. Remote communities or students without access at home may be able to use the frequency and bandwidth to connect to the Internet. This network could potentially have a significant impact in bridging the digital divide for underserved and unserved populations.



Currently we are providing technical and development assistance to several communities and counties throughout the state. The lessons learned from the communities that have successfully expanded broadband to their citizens will be captured in the plan.



## SUCCESSES AND MOMENTUM



**SUCCESSFUL USDA  
GRANT DEPLOYMENT**  
YANCEY COUNTY, NC

Residential customers can  
get 500 megabits-per-  
second connections



**ECONOMIC  
DEVELOPMENT**  
GRAHAM COUNTY, NC

Provider deployment into a  
region previously deemed  
uncompetitive



**INFRASTRUCTURE  
DEVELOPMENT**  
CONNECT AMERICA

More than \$19 million in  
annual funding during the  
next six years will help with  
the buildout of broadband  
service



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## Next Steps

We continue to gather, analyze and synthesize availability, adoption, and utilization data from sources to better inform the report's final recommendations. These sources include the FCC, the NC Department of Commerce's Citizen Survey, NTIA and other federal agencies, and private foundations (Pew, Benton, Brookings Institution among others). Much of this data will frame the current challenges to broadband deployment and adoption we face in North Carolina.

The next phases of planning and development of the State's broadband plan will involve engaging stakeholder groups' and state agencies' for assistance and participation. Currently we are developing a schedule of workshop meetings where BIO will engage stakeholders from a variety of areas to get specific feedback on strengths and weaknesses, challenges, and opportunities for improvement. Specific stakeholder groups include K-12/education, workforce development and small business, telemedicine, and State agencies. These meetings will begin in December and continue through March of 2016.

The information and feedback gathered in these meetings will inform the recommendations included in the plan. Recommendations, in part, will focus on how to better leverage existing infrastructure, streamlining state and local permitting and access to right-of-ways, methods for



fostering public-private partnerships, and creative approaches to funding. For example, in the near future the state may benefit from the federal government's broadening of existing grant programs, such as E-Rate and HUD community block grants, for broadband deployment. For economic development initiatives, the plan will consider how the state can leverage existing funds and incentives to support projects in disadvantaged communities.

Additionally, community leadership plays a key role in communities that enjoy universal high-speed, affordable broadband service. It will be the difference between the haves and the have-nots. Therefore, recommendations will consider what communities need to do to organize effectively.

Solutions will highlight successful methods to incentivize providers to expand, enhance, and lower costs. For example, all K-12 schools and community colleges have fiber to their doors. Providers bid to provide service. Communities can work more closely with schools and work to create incentives to leverage service to the broader community. Also, communities, partnering with private providers, could look at ways to use fiber to the school to establish wireless service from the school to the community.

Finally, the state needs to act as the convener, a thought leader and resource center to better direct projects or providers. Currently, BIO provides technical assistance team to be proactive and target communities in need. We need to continue to connect private providers, community leaders, state agencies, and funding sources to identify projects and collaborate to implement project plans.

The plan will be divided into chapters that will include:

- A brief history, current status of availability and general location of broadband infrastructure,
- Findings and analysis of the Availability challenges throughout the State,
- A study and analysis of Adoption challenges facing the State,
- An in-depth look at several key areas including economic development, workforce, telehealth, and the "homework gap" (students without access to Internet at home), and,
- Case studies to highlight successful deployment and strategies to support affordability, including potential partnerships and sources of funding to support the effort, and,
- Recommendations to lawmakers and community leaders that will specifically address the challenges identified and the means, methods and best practices for achieving state-wide access.

The target date for the completion of the State Broadband Plan is Spring 2016.

## Appendix A

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Session Law 2015-241, H97

### **STATE BROADBAND PLAN**

**SECTION 7.23.(a)** The State CIO shall develop a State broadband plan that includes:

- (1) Information regarding the availability and functionality of broadband throughout the State and an evaluation of the current deployment of broadband service.
- (2) A strategy to support the affordability of broadband service as well as maximum utilization of broadband infrastructure, including potential partnerships and sources of funding to support the effort.
- (3) Analysis of means, methods, and best practices to establish universal broadband access across the State.

In developing the State broadband plan, the State CIO shall coordinate with other State agencies in order to maximize the effectiveness and efficiency of available resources.

**SECTION 7.23.(b)** For the 2015-2017 fiscal biennium, by December 1, 2015, and then annually thereafter, the State CIO shall provide a report to the Joint Legislative Oversight Committee on Information Technology and the Fiscal

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# EXHIBIT PDK 7



**Table 1**  
**Certified States That Apply The FCC Rate To Investor-Owned Utilities**

State	Pertinent Statute(s)	Key Rule(s) and/or Order(s)	Methodology/Comments
Alaska	Alaska Stat. §§ 42.05.311, 42.05.321	Alaska Admin. Code, Title 3 § 52.900 – 940; <i>Consideration of Rules Governing Joint Use of Utility Facilities and Amending Joint-Use Regulations Adopted Under 3 ACC 52.900 – 3 AAC 52.940</i> , Order Adopting Regulations, 2002 Alas. PUC LEXIS 689 (2002)	FCC Rate
California	Cal. Pub. Util. Code § 767.5	<i>Order Instituting Rulemaking on the Commission's Own Motion into Competition for Local Exchange Service</i> , Decision 98-10-058, 1998 Cal. PUC LEXIS 879 (1998)	FCC Rate
Connecticut	Conn. Gen. Stat. §§ 16-1, 16-19, 16-332	<i>Application of Southern New England Telephone Co. to Amend its Rates and Rate Structure</i> , Docket No. 92-09-19, Decision, 1993 Conn. PUC LEXIS 5 (1993)	FCC Rate
Idaho	Idaho Code § 61-538	<i>Washington Water Power Co. v. Benewah Cable Co.</i> , Case No. U-1008-206, Order No. 19229, 1984 Ida. PUC LEXIS 100 (1984)	FCC Rate
Illinois	220 Ill. Comp. Stat. 5/7-102, 5/9-101	83 Ill. Admin. Code § 315.10 through 315.70	FCC Rate

State	Pertinent Statute(s)	Key Rule(s) and/or Order(s)	Methodology/Comments
Kentucky	Ky. Rev. Stat. Ann. § 278.040 and 278.280(2)	<i>Adoption of a Standard Methodology for Establishing Rates for CATV Pole Attachments</i> , Case. No. 251, Order, 49 P.U.R. 4 <sup>th</sup> 127 (1982); 807 Ky. Admin. Regs. 5:006 (Sec. 21)	FCC Rate (Very close state variant)
Massachusetts	Ma. Gen. Laws ch. 166, § 25(a)	Mass. Regs. Code Title 220 § 45.00 – 45.11; <i>Cablevision of Boston v. Boston Edison Co.</i> , DPU/DTE 97-82 (1998); <i>Order Establishing Complaint and Enforcement Procedures to Ensure that Telecommunications Carriers and Cable System Operators Have Non-Discriminatory Access to Utility Poles, Ducts, Conduits and Rights-of-Way</i> , DTE 98-36-A, Order Promulgating Final Regulations, 2000 Mass. PUC LEXIS 21 (2000)	FCC Rate
Michigan	Mich. Comp. Laws Stat. § 460.6g (regulating electric poles); Mich. Comp. Laws Stat. § 484.2361 (regulating telecom poles)	<i>Application of Consumers Power Co.</i> , Case Nos. U-10741, U-10816, U-108211, Opinion and Order, 1997 Mich. PUC LEXIS 26 (1997)	FCC Rate
New Jersey	N.J. Stat. Ann. §§ 48:5A-20, 48:5A-21	N.J. Admin. Code Title 14:18 – 2.9; <i>West Jersey Tel. Co.</i> , Docket Nos. CO85121263 et al., 77 PUR 4 <sup>th</sup> 89 (1986)	FCC Rate

State	Pertinent Statute(s)	Key Rule(s) and/or Order(s)s	Methodology/Comments
New York	N.Y. Pub. Serv. Law § 119-a	<i>Certain Pole Attachment Issues Which Arose in Case No. 94-C-0095</i> , Opinion No. 97-10, 1997 NY PUC LEXIS 364 (1997)	FCC Rate
Ohio	Ohio Rev. Code Ann. §§ 4905.02, 4905.71	<i>Columbus and Southern Ohio Electric Co.</i> , Case Nos. 81-1058-EL-AIR, 82-654-EL-ATA, 50 PUR 4 <sup>th</sup> 37 (1982)	FCC Rate
Oregon	Or. Rev. Stat. § 757.270 – 290, 759.650 – 675	Or. Admin. Rule 860-028-0110 to 860-028-240; <i>Rulemaking to Amend Oregon Admin. Rules Relating to Safety and Attachment Standards</i> , 2001 Ore. PUC LEXIS 483 (2001)	FCC Rate
Utah	Utah Code Ann. § 54-4-13	Utah Admin. Code R. § 746-345	FCC Rate
Vermont	Vt. Stat. Ann. Title 30 §§ 225, 226	Vt. Public Service Board Rules 3.700 – 3.710	FCC Rate (very close state variant)
Washington	Wash. Rev. Code §§ 80.54.010 – 80.54.070		FCC Rate.



**Table 2**  
**States That Apply The FCC Rate To Cooperatively And/Or Municipally-Owned Utilities**

State	Pertinent Statute(s)	Key Rule(s) and/or Order(s)	Methodology/Comments
Alaska (coops and munis)	Alaska Stat. §§ 42.05.311, 42.05.321; Alaska Stat. § 42.05.990(5)	Alaska Admin. Code, Title 3 § 52.900 – 940; <i>Consideration of Rules Governing Joint Use of Utility Facilities and Amending Joint-Use Regulations Adopted Under 3 ACC 52.900 – 3 AAC 52.940</i> , Order Adopting Regulations, 2002 Alas. PUC LEXIS 689 (2002).	FCC Rate
California (munis)	Cal. Pub. Util. Code § 9510	FCC Rate, 47 U.S.C. § 224(d). Pole attachment rate disputes brought to court.	FCC Rate
Colorado (munis)	Co. Rev. Stat. § 38-5.5-108(1)	FCC Rate, 47 U.S.C. § 224, as amended.	FCC Rate
Kentucky (coops)	Ky. Rev. Stat. Ann. § 278.040 and 278.280(2); Ky. Rev. Stat. Ann. § 279.210	<i>Adoption of a Standard Methodology for Establishing Rates for CATV Pole Attachments</i> , Case. No. 251, Order, 49 P.U.R. 4 <sup>th</sup> 127 (1982); 807 Ky. Admin. Regs. 5:006 (Sec. 21); <i>Ballard Rural Telephone Cooperative Corporation, Inc. v. Jackson Purchase Energy Corp.</i> , Case No. 2004-00036 (2007)	FCC Rate (very close state variant)

State	Pertinent Statute(s)	Key Rule(s) and/or Order(s)s	Methodology/Comments
Michigan (coops)	Mich. Comp. Laws Stat. § 460.6g (regulating electric poles); Mich. Comp. Laws Stat. § 484.2361 (regulating telecom poles); Mich. Comp. Laws Stat. § 460.6(1) (giving Mich. PSC jurisdiction over cooperatives)	<i>Commission's Own Motion to Examine Setting Just and Reasonable Rates for Attachments to Utility Poles, Ducts and Conduits Pursuant to MCL 460.6g</i> , Docket No. U-10831, Opinion and Order (1997); <i>Application of Consumers Power Co.</i> , Case Nos. U-10741, U-10816, U-108211, 1997 Mich. PUC LEXIS 26 (1997)	FCC Rate
Missouri (munis)	V.A.M.S. § 67.5104 (pole attachment fees, terms and conditions must be nondiscriminatory, just and reasonable, and in no event more than the FCC Rate)	FCC Rate, 47 U.S.C. § 224(d)	FCC Rate
New York (munis)	N.Y. Pub. Serv. Law § 119-a	<i>Proceeding on Motion of the Commission to Regulate Pole Attachment Rates for Municipal-Owned Poles</i> , Case 06-E-1427, Order on Municipal Pole Attachment Rates, 1997 NY PUC LEXIS 152 (2007)	FCC Rate
Oregon (coops and munis)	Or. Rev. Stat. § 757.270 – 290, 759.650 – 675; Or. Rev. Stat. § 757.276 (Or. PUC has authority to regulate pole attachment of “consumer-owned utilities”); Or. Rev. Stat. § 757.270(2) (a “consumer-owned utility” includes coops and munis)	Or. Admin. Rule 860-028-0110 to 860-028-240; <i>Rulemaking to Amend Oregon Admin. Rules Relating to Safety and Attachment Standards</i> , 2001 Ore. PUC LEXIS 483 (2001)	FCC Rate

State	Pertinent Statute(s)	Key Rule(s) and/or Order(s)s	Methodology/Comments
Texas (munis)	Tex. Util. Code § 54.204	Order on Certified Issues, PUC Docket No. 36633, SOAH Docket No. 473-09-5470, <i>CPS Energy v. Public Utility Commission of Texas</i> , (June 24, 2011)	FCC Rate (very close state variant)
Utah (coops)	Utah Code Ann. § 54-4-13; Utah Code Ann. § 54-2-1(16) (defining public utilities to include coops)	Utah Admin. Code R. § 746-345	FCC Rate
Vermont (coops and munis)	Vt. Stat. Ann. Title 30 §§ 225, 226; Vt. Stat. Ann. Title 30 § 201 (gives Vt. PSB jurisdiction over coops and munis)	Vt. Public Service Board Rules 3.700 – 3.710	FCC Rate (very close state variant)



I/A  
1014/1015

# EXHIBIT PDK 8

Re Cable Television Pole Attachments

Intervenors: Louisville Gas and Electric Company, South Central Bell Telephone Company, Union Light, Heat and Power Company, Cincinnati Bell, Inc., General Telephone Company of Kentucky, Kentucky Power Company, Continental Telephone Company, Echo Telephone Company, Kentucky Utilities Company, Kentucky Cable Television Association, Consumer Protection Division of Attorney General's Office, Kentucky Association of Electric Cooperatives, Duo County Telephone Cooperative, Thacker-Grigsby Telephone Company, Foothills Rural Telephone Cooperative Corporation, Inc., Peoples Rural Telephone Cooperative Corporation, Inc., Ballard Rural Telephone Cooperative Corporation, Inc., and Logan Telephone Cooperative, Inc.  
Administrative Case No. 251

Kentucky Public Service Commission  
September 17, 1982

ADOPTION of a standard methodology for establishing rates for cable television attachments. For prior decision, see (1982) 48 PUR4th 567.

P.U.R. Headnote and Classification.

RADIO AND TELEVISION

s7.1--Cable television--Treatment as customer.

Ky.P.S.C. 1982

In order to adopt a uniform methodology of rates, cable television operators were required to be treated as utility customers and thus have the right to receive service (make pole attachments) just as telephone or electric customers had the right to receive service. [1]

Re Cable Television Pole Attachments

P.U.R. Headnote and Classification

RADIO AND TELEVISION

s7.1--Cable television--Bonding requirement for service.

Ky.P.S.C. 1982

The cable television operators formed a separate classification of customer, with different rights and responsibilities; therefore, it was not discriminatory to allow a bonding requirement to assure safe and adequate construction and operating practices on the part of the operator, especially during the initial phases of construction and operation. [2]

Re Cable Television Pole Attachments

P.U.R. Headnote and Classification

RADIO AND TELEVISION

s7.1--Cable television--Penalty charges--Unauthorized attachments.

Ky.P.S.C. 1982

A penalty charge for unauthorized attachments was permitted for an amount that was not greater than twice the amount equal to the rate that would have been due had the installation been made the day after the last previous inspection. [3]

Re Cable Television Pole Attachments

P.U.R. Headnote and Classification

RADIO AND TELEVISION

s7.1--Cable television--Contract with electric utility--'Joint use' agreement.

Ky.P.S.C. 1982

Since cable television customers were to be treated as customers of the utilities with concomitant customer rights, they were not required to be offered 'joint use' arrangements for poles that the utilities offered to each other. [4]

Re Cable Television Pole Attachments

P.U.R. Headnote and Classification

RADIO AND TELEVISION

s7.1--Cable television--Rates for electric service.

Ky.P.S.C. 1982

To determine the rates utilities should charge for their incremental cost of providing pole attachment service to a cable television company, a methodology was approved whereby an annual carrying charge was multiplied by the embedded cost of an average bare pole of the utility of the type and size which was or could be used for the provision of an attachment, and then that figure was multiplied by the percentage of usable space used for cable pole attachments. [5]

Re Cable Television Pole Attachments

P.U.R. Headnote and Classification

RADIO AND TELEVISION

s7.1--Cable television--Carrying charges for service.



Ky.P.S.C. 1982

Having determined that a cable television operator would be considered a customer of the utility, the commission required the cable television company to be subject to carrying charges even though some of the charges had no relationship to the services provided. [6]

Re Cable Television Pole Attachments

P.U.R. Headnote and Classification

#### RADIO AND TELEVISION

s7.1--Cable television--Utility pole use.

Ky.P.S.C. 1982

The use to which a utility's pole was subjected would determine the appropriate factors in computing the rate to be charged an attaching cable television operator. [7]

Re Cable Television Pole Attachments

P.U.R. Headnote and Classification

#### RADIO AND TELEVISION

s7.1--Cable television--Charges for conduit use.

Ky.P.S.C. 1982

The appropriate charge for conduit use by cable television operators was (1) the current cost per duct foot for the type and size of conduit used, divided by (2) the appropriate allowable percentage fill for the size of conduit used, multiplied by (3) the current annual charge factors developed for conduit. [8]

Re Cable Television Pole Attachments

By the COMMISSION:

#### Preface

The commission has before it South Central Bell Telephone Company's petition for modification, Louisville Gas and Electric Company's petition to reconsider, Kentucky Utilities Company's petition for rehearing, Kentucky Power Company's petition for reconsideration, and Kentucky Cable Television Association's motion for rehearing and/or modification, all timely filed, with respect to the commission's order dated August 12, 1982.

This order incorporates the modifications and points of clarification which the

(Publication page references are not available for this document.)

commission finds appropriate after consideration of the above motions and petitions, and replaces, in its entirety, the order of August 12, 1982 (48 PUR4th 567). Appendix 'A,' attached hereto and made a part hereof, contains the comments of the commission on the issues so raised.

Having considered all the issues raised by the motions and petitions of the parties, the commission finds that it will not be necessary to have further hearings in this matter.

#### Amended Order

On petitions of regulated telephone utilities (Case No. 8040) and regulated electric utilities (Case No. 8090), which were consolidated, the commission on August 26, 1981, asserted jurisdiction over the rates, terms, and conditions for pole attachment space made available to cable television ('CATV') systems by telephone and electric utilities. Tariffs ordered to be filed were rejected by the commission, which by order of October 28, 1981, established this administrative case to determine a standard methodology for calculating rates for pole attachment space.

Hearings were held on February 2, 3, and 4, 1982, for direct testimony. Rebuttal testimony was prefiled, and witnesses subjected to cross-examination on March 18, 1982, with final oral argument on March 25, 1982.

Parties of record were Louisville Gas and Electric Company, South Central Bell Telephone Company, Union Light, Heat and Power Company, Cincinnati Bell, Inc., General Telephone Company of Kentucky, Kentucky Power Company, Continental Telephone Company, Echo Telephone Company (now Allied Telephone Company of Kentucky), Kentucky Utilities Company, Kentucky Cable Television Association, consumer protection division of the attorney general's office, Kentucky Association of Electric Cooperatives, and Duo County Telephone Cooperative. Others who submitted information or testimony were Thacker-Grigsby Telephone Company, Foothills Rural Telephone Cooperative Corporation, Inc., Peoples Rural Telephone Cooperative Corporation, Inc., Ballard Rural Telephone Cooperative Corporation, Inc., and Logan Telephone Cooperative, Inc.

#### Discussion

[1] In its order of August 26, 1981, the commission directed regulated utilities which provide CATV pole attachment services to file tariffs concerning the provision of such service. The tariffs which were filed proposed rates, terms, and conditions which varied widely, and in some cases did not afford CATV operators rights equal to those afforded other utility customers. For these reasons of convenience, the commission determined that a uniform methodology should be established by which fair, just, and reasonable pole attachment rates could be determined.

At the hearings on methodology, it developed that some minimum equitable standards for terms and conditions would be required to assure CATV operators that to the extent possible they would have the same rights as other utility customers. First, as a tariff customer, each qualified CATV operator must have the right to receive service (make pole attachments), just as a telephone or electric customer has the right to receive service. Similarly, the CATV operator must be allowed to remain a customer by observing the usual customer obligations, such as payment of bills and conformance to applicable safety standards.

### Objectionable Provisions in Agreements

[2] [3] Cable television operators assert that the present practice of some utilities in requiring bonds for satisfactory construction practices and payment of billings imposes restrictions more burdensome than those imposed on other utility customers. However, while the CATV operator will be a utility customer, it must be recognized that it forms a separate classification of customer, with different rights and responsibilities. The imposition of a bonding requirement is not unlike the deposit requirement for other utility customers, except that the CATV operator climbs and works on poles, and makes pole attachments, a situation uniquely different from that of utility customers merely receiving electric or telephone service. For this reason, the commission does not find it discriminatory to allow a bonding requirement to assure safe and adequate construction and operating practices on the part of the CATV operator, especially during the initial phases of construction and operation. However, the commission will expect that the size of the bond or other required assurances will be reasonably related to the size and scope of the proposed CATV system, and will be reduced or lifted after the operator has proven itself a reliable utility customer.

The CATV operators complained of the charges imposed by the utilities for periodic inspections of the attachments to the poles, but generally were not dissatisfied with 'make-ready' charges determined by agreement of the parties after a 'walk-through' inspection of the proposed CATV system by representatives of the operator and the utility. The commission recognizes the necessity for periodic inspections of utility plant for safety and other reasons, and commission regulations (807 KAR 5:006, § 22) require them, without any provision for additional payment by customers. Of course, when substandard installations are found which are not created by the utility but by the CATV operator, the utility should charge the CATV operator for the cost of correcting them, plus some contribution toward administrative costs and labor and materials costs for making such corrections.

Similarly, since some CATV operators have made attachments to utility poles without prior authorization, and the utility must rely, between inspections, on voluntary reporting by such operators, it is reasonable for the utility to charge a penalty for unauthorized attachments. We will allow tariff provisions which provide for a charge of not greater than twice the amount equal to the rate that would have been due had the installation been made the day after the last previous required inspection. Additionally, tariffs may also provide for 'make-ready' charges for unauthorized attachments not to exceed twice the charges which would have been imposed if the attachment had been properly authorized.

Cable television operators argue that some utilities have unfairly imposed provisions in their agreements that required the operators to reimburse the utilities for changes made after the initial CATV attachments have been made, when such changes were not required by CATV operations. They cite some instances when, after initially allowing CATV attachment to their poles, the utilities changed the use of the pole and required the CATV operator to pay for the changes.

The commission agrees that a number of these provisions and charges may have been unfair or unnecessary. When a utility subsequently requires a change in its poles or attachments for reasons unrelated to CATV operations, the CATV operator should be given notice of the changes required--e.g., relocation to another pole--and sufficient time to accomplish the CATV-related change. Normally, forty-eight hours will be sufficient time for advance notice of a change, unless an emergency requires a shorter period. If the CATV operator



(Publication page references are not available for this document.)

is unable or unwilling to meet the utility's time schedule for such changes, the utility may do the work and charge the CATV operator its reasonable costs for performing the change of CATV attachments.

Also, the CATV operators argue that a number of the agreements imposed on them for pole attachments have included 'hold harmless clauses' and have required them to maintain insurance coverage against their negligence and that of the utility. The commission is of the opinion that such requirements generally are excessive. Except for compelling reasons requiring additional protective provisions, the commission will approve only tariff provisions which require insurance or a bond (at CATV's option) to protect the utility and the public against claims for liability arising out of the negligence of the CATV operator or the joint negligence of the CATV operator and the utility.

#### CATV Operators Are Not Joint Users

[4] Considerable argument, and some evidence, was offered on behalf of the CATV operators that they have been treated unfairly by the utilities in not being accorded many of the rights granted each other by the utilities in their joint use arrangements. This issue is resolved by the decision of this commission to treat CATV operators as customers of the utilities, with concomitant customer rights. Cable television operators do not argue that they should be allowed to construct pole line systems of their own to share with the regulated utilities under typical joint use arrangements, and we see no reason why they should. Since they have no poles to 'share,' they need not be offered terms equivalent to those in prevailing joint use agreements between utilities both of which own and share poles.

#### Methodology

[5] The CATV operators contend that the FCC methodology should be adopted by this commission. We do not agree. While the FCC methodology purports to recover for the utility its incremental cost of providing pole attachment service, it does not provide for the allocation of the utility's full cost of providing such service among all its classifications of customers. This commission cannot accept a formula which allocates costs so unevenly.

The commission recognizes, as recommended by the CATV operators and most of the utilities represented at the proceeding, that the formula should be simple and easily applied. Further, the formula should produce a fair, just, and reasonable rate, based on the fully allocated costs of the utility in furnishing pole attachment services.

Ideally, the various cost factors needed to apply the formula should be readily available public information, such as that disclosed in the utility's required annual reports to the commission or other public agencies. When this is not the case, we find that each utility shall file with its proposed tariffs the source and justification for cost factors used in applying the formula to compute its rate to the CATV operator.

The commission has determined that the methodology shall be (1) the embedded cost of an average bare pole of the utility of the type and size which is or may be used for the provision of CATV attachment, (2) multiplied by an annual carrying charge, and (3) this product multiplied by the percentage of usable space used for CATV pole attachments.

#### Bare Pole Costs

In determining the embedded cost of a bare pole, the commission finds that poles less than 30 feet or more than 45 feet long are used so infrequently for CATV purposes that they should be excluded from the calculation. Cross arms, anchors, guy wires, grounds, and other appurtenances not installed for CATV purposes will be excluded to establish the cost of a bare pole.

South Central Bell use 78 per cent of its gross pole accounts as a 'bare pole factor' to exclude investment attributable to appurtenances; i.e., cross arms, guys, anchors, etc. Kentucky Cable Television Association's testimony was that 85 per cent of pole accounts was an accepted industry standard for bare poles, which standard includes investment in anchors and guy wires and excludes all other appurtenances. General Telephone has also used an 85 per cent factor, but has testified that this factor excludes 'cross arms, anchors, and other fixtures,' which appears inconsistent with the testimony of other parties.

Therefore, for telephone utilities the commission finds that 22 per cent of the utility's pole account consists of appurtenances and should be excluded.

For electric utilities, the cost of major appurtenances such as cross arms can be specifically identified in subaccounts of the Federal Energy Regulatory Commission ('FERC') Form 1, Account 364, and excluded, but lesser appurtenances such as aerial cable clamps, pole top pins, and some ground wires are not segregated in the basic pole accounts. Kentucky Power offered specific evidence on ground wire costs, for which it adds \$12.41 to the pole accounts, and estimated that 8.7 per cent of the unsegregated pole accounts represents lesser appurtenances. It was acknowledged generally by CATV operators and the telephone utilities that an exclusion of 15 per cent for pole appurtenances would be reasonable, but this percentage did not include the cost of anchors.

Consistent with our finding that 22 per cent of the utility's pole account is a reasonable exclusion for telephone utilities, and that the ratio of the cost of anchors to the basic pole accounts should not vary significantly between telephone and electric utilities, the commission finds that an adjustment of 15 per cent subtracted from the sum of the appropriate subaccount of FERC Form 1, Account 364, and a deduction of \$12.50 per ground, when such grounds have been included in Account 364, will reasonably approximate the cost of an average bare wooden electric utility pole. Further, when CATV has used the utility's ground wire, the \$12.50 should be added into (or back into) the bare pole cost for each such ground.

Each utility must determine its weighted average cost of two-user and three-user poles. For telephone utilities, the average cost of a two-user pole will be assumed to be the weighted average cost of all 30-foot and 35-foot poles, and for a three-user pole, the weighted average cost of 40-foot and 45-foot poles. For electric utilities, the average cost of a two-user pole will be assumed to be the weighted average cost of 35-foot and 40-foot poles, and for a three-user pole, the weighted average cost of 40-foot and 45-foot poles. Each of these averages must then be multiplied by the bare pole factors stated herein.

#### Annual Carrying Charge

(Publication page references are not available for this document.)

[6] Having determined that the CATV operator will be considered a customer of the utility, the commission finds that such customers should be required to pay their equitable share of all the utility's costs in providing service.

Cable television operators argue that certain costs of the utility have no relationship to the services provided to them such as directory advertising, insurance, and administrative overhead. However, no classification of utility customers can or should be allowed to pick and choose the categories of expense to which it will be subject.

The annual carrying charge should be designed to recover the utility's cost in providing service. Items included in this calculation should represent an equitable share of all operating and maintenance expenses, taxes, and depreciation, and a cost of money return component. The costs included in the annual carrying charge calculation should be identifiable by specific account number as established in the Uniform System of Accounts prescribed by this commission and utilized by each utility.

There should be included in the 'cost of money' factor a reasonable amount representing a return on the utility's investment in the poles. For convenience and certainty of computation, the commission finds that this return should be equal to the return on investment (or margin) allowed in the utility's last rate case.

We find it reasonable to allow a contribution by CATV toward the common costs of the utility which cannot be directly allocated to any particular classification of customer. However, each utility which includes such a contribution in its rate development must provide justification for the amount of such contribution which it proposes to include.

#### Usable Space

[7] Parties to this proceeding have generally agreed that 'average poles' be used in constructing a methodology. No party has offered to incur the costs involved in measuring, inspecting, and recording each pole which is or may be used by CATV.

Three distinct situations arise with respect to calculation of usable pole space: poles with only telephone and CATV connections, poles with only electric and CATV connections, and poles with all three connections.

In the first case, the commission concludes that poles 30 and 35 feet long are commonly used, and that an average length for convenience of calculation would be 32.5 feet. Electric and CATV connections are commonly made on 35-foot and 40-foot poles, and therefore, a 37.5-foot average pole will be reasonable for computation of the charge for that pole use. Poles with three users (telephone, electric, and CATV) are commonly 40 feet and 45 feet long, with an average length of 42.5 feet. An equal distribution of the pole population and utilization would produce a composite average pole of 37.5 feet in length. The commission notes that an average pole length of 37.5 feet was supported by CATV testimony.

All parties have agreed that CATV operators should be responsible for the use of one foot of the usable space on poles.

When a telephone and CATV attachment occupy a single pole the amount of usable space will be calculated as if it were a 32.5-foot pole. It will be assumed that the pole is buried six feet in the ground. There was much testimony concerning the height of the lowest attachment. Neither the 18 feet of CATV nor the 21 feet of some of the utilities

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appears to be realistic. An 18-foot attachment would not allow for sag in those places where safety requirements demand 18 feet of clearance, and a 21-foot attachment would be unnecessarily high for most installations. Cable television should not be penalized for connections that telephone utilities have placed unnecessarily high on their poles, but neither will this commission assume that any connections are made so low as to produce violations of the National Electric Safety Code ('NESC'). Therefore, for purposes of calculation, the commission finds that an average height of the lowest connection on the pole of 20 feet is reasonable, and will allow for adequate clearances for cable spans. The top foot of a pole of this two-user configuration is not normally used.

Assuming the average two-user (telephone and CATV) pole of 32.5 feet in length, less six feet buried, 20 feet to the lowest attachment, and a foot of unused space at the top, there would be 5.5 feet of usable pole space. The CATV operator must be responsible for one foot. (1/55 or 0.1818.)

The typical two-user electric and CATV pole is assumed to be an average of 37.5 feet. National Electric Safety Code regulations for poles on which high voltage electrical current is carried require a 40-inch clearance between the lowest electrical conductor and the highest communications conductor. There was some evidence that on occasion the electric utilities have used a small portion of the safety clearance space for electrical appurtenances such as transformers. Similarly, the CATV operators have pointed to occasional use of the top foot of the pole by electrical utilities as an argument that this space should be included in 'usable space' for all poles. To take these situations into account, the commission finds that it is reasonable to assign the top foot of the pole as usable space by the electric utility, while retaining the integrity of the NESC-required 40-inch clearance as nonusable space in situations involving the electric utility.

Assuming the typical two-user electric and CATV pole of an average 37.5 feet in length, less six feet buried, 20 feet to the lowest attachment, and 3.33 feet required safety space, there would be 8.17 feet of usable pole space. The CATV customer must be responsible for one foot. (1/8.17 or 0.1224.)

Assuming the typical three-user pole of 42.5 feet in length, less six feet buried, 20 feet to the lowest attachment, 3.33 feet required safety space, there would be 13.17 feet of usable pole space. The CATV customer must be responsible for one foot. (1/13.17 or 0.0759.)

In summary, the commission finds that the use to which a pole is subjected will determine the appropriate factors in computing the rate to be charged the attaching CATV operator.

The telephone utility with a two-user situation (telephone and CATV), should take its weighted average cost of 30-foot and 35-foot poles, multiplied by its bare pole factor of 78 per cent, multiplied by its annual carrying charges, and finally multiplied by the appropriate usage factor of 0.1818 to arrive at an annual pole charge for CATV attachments for such use.

The electric utility with a two-user situation (electric and CATV) should take its weighted average cost of 35-foot and 40-foot poles multiplied by its bare pole factor of 85 per cent, adjusted for grounds, multiplied by its annual carrying charges, and finally multiplied by the appropriate usage factor of 0.1224 to arrive at an annual pole charge for CATV attachments for such use.

Finally, in the case of the three-user pole, the utility should take its weighted average cost of 40-foot and 45-foot poles, multiplied by its bare pole factor (85 per cent for



(Publication page references are not available for this document.)

electric, adjusted for grounds, and 78 per cent for telephone utilities), multiplied by its annual carrying charges, and finally multiplied by the appropriate usage factor of 0.0759 to arrive at an annual pole charge for CATV attachments for such use.

We are aware that some utilities may not have accurate records of the number of two-user and three-user poles with CATV attachments. Although we require that a two-user and a three-user rate be developed and filed by each affected utility, the commission will allow a composite billing rate based on relative pole populations when a complete inventory of CATV pole attachments is not presently available. Upon compilation of such inventory records, retroactive billing adjustments should be made to the effective date of the tariffs. We see no reason why special inventories should be made for this purpose, but should be accomplished in conjunction with the periodic inspections of pole plant required by commission regulations. (807 KAR 5:006, § The maximum time limitations for the use of the composite rate will be the same as the time allowed for the applicable plant inspection requirements of the regulation.

#### Anchor Attachments

Much testimony was offered by CATV operators that anchor costs be included in pole costs. However, since CATV operators generally have the option of installing their own anchors or utilizing an existing anchor previously installed by the utility, it would be inappropriate to include a charge for anchor usage as a part of the pole attachment costs. When anchors of the utilities are used, the commission finds that a fully allocated portion of the utility's cost for such anchors should be identified and paid for separately.

The method should be essentially the same as for pole attachments, being (1) the embedded cost of anchors, multiplied by (2) annual carrying charges multiplied by (3) the appropriate usage factor. When a utility has recorded its embedded cost of anchors, that figure should be used. In the absence of such information, it is reasonable to assume that a utility's cost development of anchors parallels the cost development of poles used by CATV. Therefore, the embedded investment for an anchor should equal the average current investment for a typical anchor, multiplied by the ratio of the average embedded investment for 30- and 45-foot poles to the average current costs for 30- to 45-foot poles. The annual carrying charge factors should be the same as for poles. Finally, as to the usage factor, CATV should be responsible for one-half of the costs for two-user anchors, and one-third of the cost of three-user anchors.

#### Conduit

[8] Very little attention was paid at the hearing to charges for sharing conduit space. South Central Bell maintained that conduit space should be charged at a rate based on current costs rather than embedded costs because once wire is placed in conduit, that portion of the conduit is no longer available for any other use by any party. Hence, current conduit costs more nearly reflect the utility's costs for sharing this type of installation.

Although not offered in evidence by any of the parties, the commission takes official notice that the National Electric Code ('NEC') sets forth the maximum allowable fill percentage for wire placed in the various sizes of conduit, where electrical conductors are involved. When only communications conductors are involved, the telephone utilities should use fill standards appropriate to that industry, with documentation supporting

(Publication page references are not available for this document.)

such standards.

Therefore the commission finds that the appropriate charge for conduit use by CATV operators should be (1) the current cost per duct foot for the type and size of conduit used, divided by (2) the appropriate allowable percentage fill for the size of conduit used, multiplied by (3) the current annual charge factors developed for conduit.

#### Findings and Order

The commission, after considering the matter and all evidence of record and being advised, finds that:

- (1) The CATV operator, as a user of utility poles for attachments of its cables, is a customer of the regulated utility pole owner;
- (2) As a customer of the regulated utility, the CATV operator should be obligated to pay its share of the fully allocated costs of providing service to it;
- (3) The rights and obligations of the CATV operator and the regulated utility are as set forth herein;
- (4) The method for determining the applicable rates and charges are as set forth herein;
- (5) The commission will allow deviations from the mathematical elements found reasonable herein only when a major discrepancy exists between the contested element and the average characteristics of the utility, and the burden of proof should be upon the party asserting the need for such deviation;
- (6) Each utility should file tariffs for CATV pole attachments and charges conforming to the principles and findings in this order; and
- (7) On and after the effective date of the tariffs required herein, all existing pole attachment agreements should be superseded.

#### Appendix 'A'

##### Appendix to an Order of the Public Service Commission

In Administrative Case No. 251, Dated September 17, 1982

The commission has reviewed, reconsidered, and has made certain modifications and clarifications to its order of August 12, 1982, in Administrative Case No. 251 (48 PUR4th 567).

The commission's reasons for granting reconsideration, making some modifications, and denying others, are as follows:

##### A. South Central Bell Telephone Company's Petition for Modification

(Publication page references are not available for this document.)

1. Bell pointed out that it does not have accurate records of the number of two-party and three-party poles which have CATV attachments. The commission adopted Bell's suggestion that a composite rate based on relative pole populations (of which it does have a record) be allowed until accurate records can be obtained. At that time, billing adjustments are to be made, retroactive to the date of the tariffs.

2. Next, Bell requested clarification as to whether contribution toward common costs of the utility would be allowed as part of the rate computation. The commission has allowed such contribution when adequate justification is provided.

3. Finally, Bell correctly points out that the National Electric Code conduit fill limitations were incorrectly applied to the telephone utilities, which would result in higher rates to CATV operators. The commission has allowed the telephone utilities to use conduit fill standards appropriate to their industry, with supporting documentation. Further, Bell requested the commission to modify its order with respect to the annual carrying charges for conduit use so that it merely allows the same types of charges for conduit as for poles. The commission did so.

#### B. Louisville Gas and Electric Company's Petition to Reconsider

1. Louisville Gas and Electric Company points out that to limit a CATV operator's indemnification to those cases in which the operator is at fault might unnecessarily increase the expense of the utility's insuring arrangements and might cause additional expense in the defense of joint fault liability cases. The commission agreed, and has amended the order to allow a requirement for insuring against joint fault liability as well as against the sole negligence of the CATV operator. To go further and require indemnification by the CATV operator also against the sole negligence of the utility would offend the basic premise that the CATV is a customer of the utility.

2. Louisville Gas and Electric Company argues that the CATV operator should in some manner pay more than the announced methodology provides as its share of the cost of the 40-inch safety clearance space required by the NESC where communications lines share pole space with electric conductors.

The commission finds that the methodology adequately charges the CATV operator with its proportionate part of all bare pole costs which include the cost of the safety space. Requiring an additional direct contribution to the cost of the safety space is no more justifiable than requiring any one party to bear more of the cost of the underground portion of the pole than the others. All portions of the pole not included in 'usable space' have been determined to benefit all parties using the pole.

#### C. Kentucky Utilities' Petition for Rehearing

1. Kentucky Utilities (KU) argues that the commission incorrectly provided a deduction of \$12.50 per pole from pole plant costs even when, as in its case, no costs had been added to the pole account for grounds. This result was not intended. We have modified the order to require deduction for ground costs only when they have previously been added to the pole accounts. Further, where CATV has attached to (utilized) the utility's ground wire, the \$12.50 should be added into (or back into) the bare pole cost for each such ground.

(Publication page references are not available for this document.)

2. Kentucky Utilities objects to the use of simple arithmetic averages of suitable pole lengths as not reflecting the amount of usable space on particular poles, and cites one example (40-foot and 45-foot poles, when there are more 40-foot poles than 45-foot poles). However, KU's evidence shows that the same disparity does not exist with respect to 35-foot and 40-foot poles, upon which the two-user methodology is based. Parties to this proceeding have generally agreed heretofore that 'average poles' be used in constructing a methodology, to avoid the costs involved in physically measuring, inspecting, and recording each pole in a system. Further, to recognize 'weighted average pole lengths' would require that each utility have a separate usable space factor, destroying the uniformity of the methodology. The logic, if any, in this objection, would require removal of all 'averages' in the methodology. Therefore, the commission found no merit in this objection, and made no changes in the methodology.

3. Kentucky Utilities challenges the commission's statement that 'each qualified CATV operator must have the right to receive service.' This statement in the order is based on the essential premise that CATV operators shall be considered customers, and not independently contracting parties. The utility should not be allowed to exclude any qualified operator if space is available, or can be made available by 'make-ready' work, for which the operator requiring the work will pay.

#### D. Kentucky Power Company's Petition for Reconsideration

1. Kentucky Power Company's (KPCo) first point is the same as KU's first point, addressed in C-1 of this appendix.

2. Next KPCo asks for confirmation that the 15 per cent deduction required of electric utilities from their pole accounts is for all appurtenances charged to such accounts, which was not the sense intended. The discussion of 'major appurtenances' and other appurtenances was by way of explanation of the percentage chosen. Kentucky Power Company had shown in its testimony that major appurtenances could be identified and removed from their pole accounts. The 15 per cent was to provide for minor appurtenances not already segregated, which KPCo estimated to be 8.7 per cent, plus an allowance for anchors, likewise not segregated, and for which the commission allows a specific charge.

We have clarified the order on this point, and have specified that for electric utilities, the 15 per cent should be deducted from the sum of the appropriate subaccounts of FERC Form 1, Account 364, thereby excluding 'major appurtenances.'

3. Kentucky Power Company asks who should bear the cost of changes made necessary by utility operations occurring after the CATV connection has been made. Since CATV operators are to be utility customers, changes occurring because of the utility's system requirements should be borne by the system as a whole, just as the cost of changes arising because of CATV system requirements are borne by CATV.

4. Kentucky Power Company objects that the order provides no incentive for the CATV operator to report all attachments. Under the provisions of the August 12, 1982, order, the maximum penalty would be for two years' charges.

We have modified the order to allow tariff provisions requiring payment of double the fee that would otherwise be paid, and likewise requiring that the charges imposed for necessary 'make-ready' work on poles with unauthorized attachments be double the amount that would have been due for attachments timely reported and authorized. We find that the usual provisions for termination of service for violation of PSC regulations are not



appropriate as a possible penalty in this situation, since the CATV customers might suffer as much as the defaulting operator.

B. Kentucky Cable Television Association's Motion for Rehearing and/or Reconsideration

1(a). The Kentucky Cable Television Association (KCATV) operators asked for clarification, as did KPCo, as to the electric utility accounts from which 15 per cent is deducted to arrive at bare pole costs. This has been done as set forth above in Section D-2. Rural Electrification Administration borrowing electric utilities not reporting to FERC should follow a parallel methodology. Also, CATV requested clarification of the treatment of grounds, which has been covered in Section C-1 of this appendix.

1(b). Kentucky Cable Television Association's second argument concerns the length of two- and three-party poles upon which average investment is based. This point is addressed in Section C-2 of this appendix. Further, the commission considered but did not adopt the results of KCATV's survey, which was contradicted by other evidence in the record, including that of one of KCATV's own witnesses.

1(c). Kentucky Cable Television Association's argument that the utilities' estimates of how many two-party and three-party poles have CATV attachments might be biased is disposed of by the addition of a provision that such estimates, when replaced by a physical inventory, are to be corrected by retroactive billing adjustments.

2. Kentucky Cable Television Association argues that the commission must specify accounts to be used in arriving at annual carrying charges.

We have modified the order to provide that the Uniform System of Accounts will be utilized. The commission will review the tariff filings and documentation submitted for adequacy and conformance to the principles set forth in the order.

3(a). Kentucky Cable Television Association argues that a 20-foot minimum grade clearance is contrary to the evidence; however, the order is based on averages; i.e., an average grade clearance established for calculation of 'usable space.' We are aware there are clearance requirements other than 18 foot, but determined that 20 foot would best approximate the overall average in order to meet NESC requirements. Kentucky Cable Television Association's survey, relied on in its motion, did not report on NESC safety clearances.

3(b). Kentucky Cable Television Association states that the commission determined that electric utilities do not use and of the 40-inch safety space. That is an incorrect reading of the order. The commission 'traded off' the occasional use of a portion of the safety space with the sometime use of the top foot of electric poles by including the entire top foot and excluding the safety space (for purposes of calculations). Also, KCATV's assertion that streetlights are located in the safety space and produce utility revenues were taken into account. This use is not general, and testimony in the record indicates that it is often not revenue producing, but an expense, when providing free streetlights is a condition of the utilities' franchise with the cities.

3(c). Kentucky Cable Television Association asserts that its survey data should be used to determine 'average pole sizes.' This is the same argument made by KCATV in Item 1(b) of its petition, and is responded to in this appendix.

4. Kentucky Cable Television Association argues that the commission erred in using

(Publication page references are not available for this document.)

current costs for conduit investment. We stand by the order. Once a section of conduit has reached maximum fill, it is not as easily 'changed out' to a larger size as are poles. Conduit is generally installed under city streets and sidewalks, and replacements or additions thereto are quite troublesome and expensive. Therefore, it is more reasonable to charge current costs for conduit than to charge current costs for poles.

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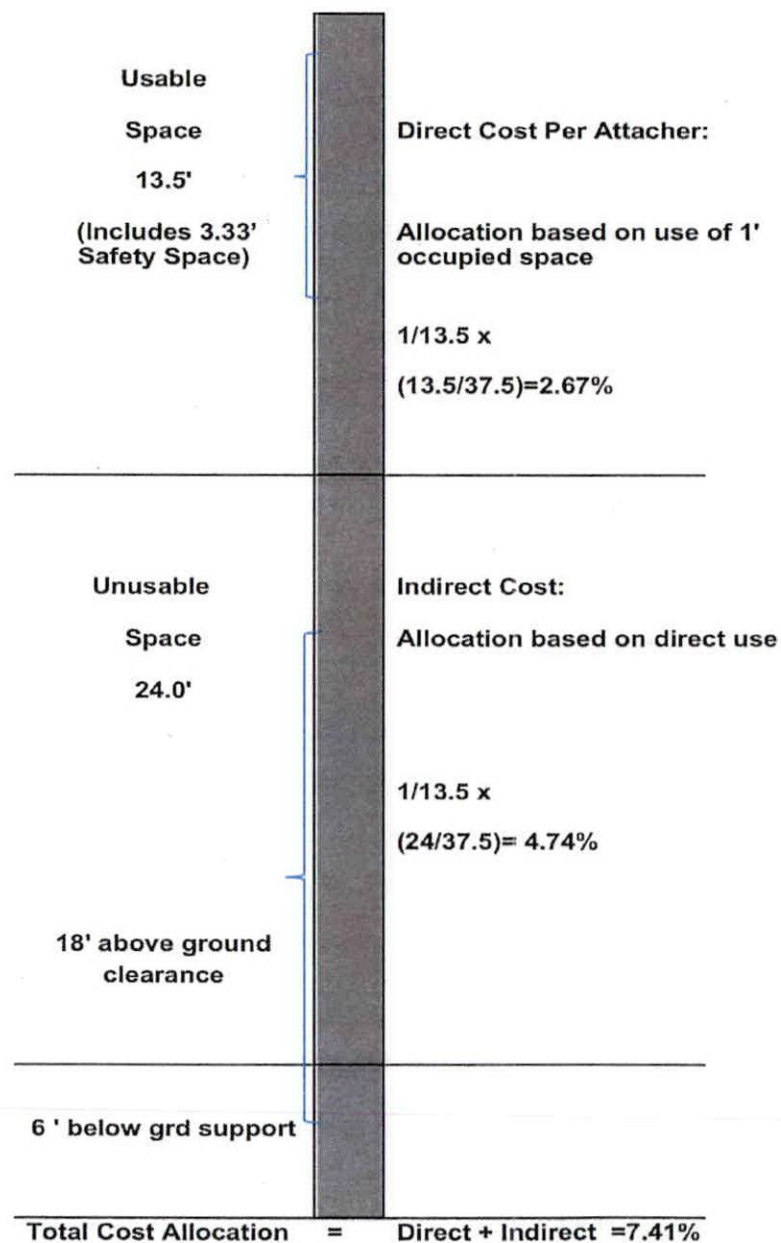
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# EXHIBIT PDK 9

# Allocation of the Full Costs of the Entire Pole under FCC Cable Methodology

## FCC Presumptions

37.5 Ft Shared Pole





I/A  
m14/m15

# EXHIBIT PDK 10

1 Q. So you became aware of the decision -- I am  
2 sorry. You became aware of TVA's policy when its  
3 board adopted it; is that correct?

4 A. That is correct.

5 Q. And do you know when the board adopted it?

6 A. February of '16, I believe.

7 Q. But you said you were aware of a study when  
8 it was first commissioned. What study are you  
9 referencing?

10 A. The LPCs, local -- I think they are called  
11 local power companies.

12 Q. For ease, if you want, we can agree that  
13 LPC refers to the cooperatively owned and municipally  
14 owned utilities who purchase power from TVA.

15 A. That is good. I knew there was a study  
16 that was being done because some of the electric  
17 co-ops that are TVA members contacted us about -- I  
18 think we actually commented on some of the original  
19 language. And I don't remember if it was from TVA or  
20 TVPPA.

21 Q. Do you remember when these electric co-ops  
22 contacted you?

23 A. No. I could -- I could go back to my  
24 e-mail or -- or records and find that. I would assume  
25 it would have been in 2015.

1 Q. You mentioned AREA earlier. Is that the  
2 Alabama Rural Electric Association?

3 A. That is correct.

4 Q. Did AREA contact you, or was it members of  
5 AREA who contacted you?

6 A. It was some of the cooperative members of  
7 AREA, if I remember correctly.

8 Q. And which members were those?

9 A. They were in North Alabama. Probably Joe  
10 Wheeler and Cullman.

11 Q. I am sorry?

12 A. Cullman, C-U-L-L-M-A-N.

13 Q. And you said a name. Joe?

14 A. Wheeler.

15 Q. Is Joe Wheeler --

16 A. It's an electric co-op.

17 Q. Is Joe Wheeler an electric co-op?

18 A. It is, yes, as is Cullman.

19 Q. How do you spell Joe Wheeler?

20 A. J-O-E. Wheeler, W-H-E-L-L-E-R [sic]. It's  
21 named for the waterway up in that area.

22 Q. I learn something new every day.

23 So you mentioned Cullman, Joe Wheeler.

24 Were there any other co-ops who contacted you about  
25 the TVA study?

1 A. Not that I remember.

2 Q. And what did the TVA study consist of?

3 A. Well, they were gathering -- they were  
4 doing fact gathering at the time. They were looking  
5 at attachment rental rates and contract terms. I  
6 don't believe they ever published anything on contract  
7 terms in the docket, and I don't remember exactly what  
8 all we produced and sent them. But it was all  
9 historical stuff. It was. And -- and we didn't  
10 get -- we were never involved any further. It just  
11 kind of went into a black hole.

12 Q. I want to clarify something. You've  
13 mentioned a TVA decision, and you've mentioned a TVA  
14 docket. Are you aware of any dockets or decisions  
15 related to pole attachment rates issued by the TVA?

16 A. Only -- I'm only aware of the exhibit that  
17 I provided.

18 Q. Is that Exhibit 8?

19 A. 8. Exhibit 8.

20 Q. WA?

21 A. WA Exhibit Number 8.

22 Q. And that is a board resolution?

23 A. That is what I'm familiar with.

24 Q. So when you talk about the TVA formula and  
25 you talk about what TVA has done, what we are really



1 talking about is a resolution passed by TVA's board?

2 A. That is correct.

3 Q. There is no docket?

4 A. No.

5 Q. There is no decision?

6 A. Correct.

7 Q. There is no order?

8 A. Right. A board resolution.

9 Q. What facts did you provide during this  
10 fact-gathering process?

11 A. I honestly can't remember what -- we were  
12 asked to provide certain things, and whatever they  
13 asked, we provided. Both of those electric co-ops are  
14 clients of ours, and we do design work and inventories  
15 and things like that. So they knew us and contacted  
16 us about questions they had.

17 Q. Did you provide information about rate  
18 methodologies?

19 A. No, I don't remember doing that.

20 Q. Did you propose any rate methodologies?

21 A. I do not believe we did.

22 Q. But you mentioned at some point, you  
23 received -- you commented on a proposal?

24 A. I don't remember saying that. I -- I don't  
25 think I -- we never commented on anything related to

1 this board resolution that was passed.

2 Q. I thought I heard you earlier say that  
3 there was a proposal from either TVA or TVPPA, you  
4 couldn't remember which, and that you may have  
5 submitted comments to that.

6 A. I -- I think what we provided was input  
7 that was requested by the two electric co-ops that I  
8 mentioned. And that was the extent.

9 Q. And that input did not include anything  
10 related to pole attachment rate methodology?

11 A. No. I'm fairly confident that that was the  
12 case. And those would have just been two co-ops out  
13 of the 165 co-ops or -- or municipals in the TVA  
14 system.

15 Q. Did you have any other role or involvement  
16 in the development of the TVA approach adopted by the  
17 board resolution?

18 A. None at all.

19 Q. What did you do to educate yourself about  
20 it?

21 A. I got a copy of it and read it, of course.

22 Q. When you say "read it," are you referring  
23 to your WA Exhibit 8?

24 A. Yes.

25 Q. And that includes the board resolution, as

1 Do you see that?

2 A. That is right. That is what I remembered  
3 in the gray area from the last time I read it.  
4 That's -- yes.

5 Q. And if we keep going in this section, if we  
6 turn the page. The top of the next page.

7 MR. VINROOT: Are we on Page 3? It  
8 has a page number.

9 MR. GEORGE: Yeah. The Page 3.

10 BY MR. GEORGE:

11 Q. It is board of directors at the top. Page  
12 3. January 22nd, 2016.

13 A. Right.

14 Q. Are you on the page at the top?

15 A. I am.

16 Q. About midway through that paragraph, do you  
17 see a sentence that begins with "Space Allocation?"

18 A. "Space allocation will be determined using  
19 the actual number of attaching parties per pole,  
20 including the pole owner." Yes.

21 Q. And are you aware of how that calculation  
22 of average number of attached amenities works?

23 A. Yes, sir, I am.

24 Q. How does that calculation work?

25 A. You only consider in the calculation poles

1 that have foreign attachments on them. You look at  
2 those poles for the pole owner that have foreign  
3 attachments. And you count not the number of  
4 attachments, but the number of parties that are  
5 attached to each of those poles.

6 So, for instance, a pole owned by a co-op  
7 that has the co-op, a telephone company with six  
8 attachments, a cable company with two attachments and  
9 a CLEC with two attachments has four attaching  
10 entities, and that's the way the number is developed.

11 You add up all of those one-party pole --  
12 I'm sorry, not one party, because they don't go into  
13 the total.

14 You add up all of the two-party poles, all  
15 of the three-party poles, all the four-party poles,  
16 all of the five-party poles. In CPS Energy we found  
17 an eight-party pole.

18 But you add all those parties together, not  
19 the number of their attachments, you sum the number of  
20 times they're on the poles, divided by the total,  
21 including the owner, divided by the number of poles  
22 owned by the owner that are in the universe, and that  
23 gives you your average number of attaching entities.

24 Q. Is that the Wil Arnett approach, or is that  
25 the TVA approach?



1           A.       That is my understanding of the TVA  
2 approach.

3           Q.       Okay. And so that approach requires that  
4 the cooperative know how many poles on its system have  
5 the third-party attachment; is that correct?

6           A.       It -- yes.

7           Q.       How is that number calculated, when the  
8 utility does not know how many of its poles have a  
9 third-party attachment?

10          A.       There was -- there was only one case of the  
11 four where we had to do a calculation. We had billing  
12 records.

13          Q.       Okay. We will get there in a second,  
14 Mr. Arnett.

15                    I guess my question is, how would TVA  
16 calculate the average -- under the TVA approach, how  
17 would you calculate the average number of attached --

18          A.       They assume --

19          Q.       -- in that situation?

20          A.       Excuse me. They assume three. They assume  
21 there is a telephone company, a cable company and a  
22 power company on every pole. That was their  
23 assumption.

24          Q.       Okay. And you've anticipated my next  
25 question, which was, how did you calculate the average

1 number of attaching entities for each of the four  
2 co-ops in this case?

3 A. We had billing records for the one co-op  
4 that didn't have pole-by-pole information. But we had  
5 billing records. And we knew how many poles had  
6 attachments by the ILEC. And the ILEC has a specific  
7 dedicated area. An exchange boundary. They don't  
8 cross into another exchange boundary.

9 We use that as the base. We assume that  
10 all poles -- I think it was ILEC. We assume that --  
11 it may have been the cable operator. But we assume  
12 that the -- that the ILECs all had a cable attachment  
13 on them, up to the point that we had to utilize all of  
14 the cable attachments that were being paid for. And  
15 then after that, we assumed it was just a two-party  
16 pole.

17 There was -- I think there was one CLEC,  
18 maybe two at that co-op. And we added those on top of  
19 the three-party poles and assumed a maximum overlap.

20 Q. And where did you get that methodology?

21 A. Mr. Henry Dent, who works for me, did a VIN  
22 diagram drawing of how to calculate the maximum  
23 overlap. And he and Ms. Inman, who looked up a  
24 formula off the Internet, both saw -- using two  
25 different methods, and got the same number to the

1 100th decimal place.

2 Q. Do you know what formula Ms. Inman looked  
3 up?

4 A. I don't. But it was -- it was on the  
5 Internet.

6 Q. Do you know where on the Internet?

7 A. No. But I can find out, and I will let you  
8 know.

9 Q. Okay. And can you look back on just Page  
10 16 and 17 of your testimony, just so we are clear,  
11 which co-op you did this calculation for?

12 A. Sure. Okay. Union Power had done an  
13 inventory, and we had detailed information for Union  
14 Power about who was on every pole. And we could very  
15 easily calculate the number. And it was 2.33 average  
16 attaching entities on Union Power.

17 Surry-Yadkin keeps pole-by-pole attachment  
18 records and they update those records monthly. The  
19 average there was 2.2.1, and it's in an Excel  
20 spreadsheet that's like 30 MG in size. It's huge.  
21 But we were able to determine which poles had  
22 attachments and who all was attached. It's by pole.

23 Jones-Onslow is where we did the annual  
24 billing records, by assuming that each pole to which  
25 Time Warner is attached also has a telephone company

1 attachment on them, up to the total number of  
2 telephone attachments. That is the way it was done.

3 So we assumed maximum overlap. We assume  
4 that there were no poles owned by Surry-Yadkin with  
5 telephone attachments that didn't also have a cable  
6 attachment.

7 Q. I am sorry, you made that assumption for  
8 Jones-Onslow?

9 A. That is correct.

10 MR. VINROOT: You said Surry-Yadkin.  
11 You meant Jones-Onslow.

12 THE WITNESS: Oh, I am sorry. Thank  
13 you.

14 BY MR. GEORGE:

15 Q. And can you explain how --

16 MR. VINROOT: Do you want to let him  
17 finish his testimony, or do you want to ask  
18 about him about Carteret? Carteret-Craven?

19 BY MR. GEORGE:

20 Q. Did you finish your testimony --

21 MR. VINROOT: He was going -- he has  
22 not.

23 MR. GEORGE: Oh, I'm sorry.

24 THE WITNESS: We did. We did.

25 MR. GEORGE: Well, thank you,

1 Mr. Vinroot.

2 BY MR. GEORGE:

3 Q. Please. Carteret-Craven.

4 A. Carteret-Craven has only 38 telephone  
5 attachments on the whole system. So we added those 38  
6 CenturyLink attachments to the Time Warner  
7 attachments. And again, another maximum overlap. And  
8 calculated the average attaching entities there to be  
9 2.0003 or 2.0.

10 Q. And what is the relationship between the  
11 average number of attaching entities and the space  
12 allocation factor used in the TVA approach?

13 A. The -- the smaller the number of attaching  
14 entities, the higher the attachment rentals because  
15 there are fewer parties sharing the common space.

16 Q. So by not using the TVA assumption of three  
17 for Jones-Onslow, your calculation produces a higher  
18 rate?

19 A. That is correct. But that was one  
20 of the -- the TVA method says that's a rebuttable  
21 presumption.

22 Q. So do you think it's reasonable that the  
23 TVA approach allocates the safety space entirely to  
24 the communications attachers on the pole?

25 A. Well, Delaware does that as well. So yeah,



1 Q. I'm not going to make any promises, but  
2 read into it what you will.

3 A. Okay.

4 Q. So on Page 53, you propose contract  
5 language that you submit the commission should adopt  
6 related to the recovery but for costs; is that right?

7 A. Yes, I do.

8 Q. How do you define "but for costs"?

9 A. That the expense would not have been  
10 required but for the presence of the cable attachment.

11 Q. And what does that include?

12 A. Permit fees. When a licensee wants to make  
13 an attachment and they submit a permit, the cost  
14 associated with receiving, logging, doing a field  
15 investigation, any engineering associated with making  
16 that pole ready, any construction that the pole owner  
17 would be required to do to make the space available  
18 for the licensee. All those typical engineering  
19 inspection may create a cost that the pole owner would  
20 not be doing but for the presence of the licensee on  
21 the pole.

22 Q. And do you know whether those types of  
23 costs are typically provided for in a pole attachment  
24 agreement?

25 A. Yes, they are.

1 Q. And how are they typically addressed in a  
2 pole attachment agreement?

3 A. It's -- agreements I'm familiar with, they  
4 are -- are addressed in Articles 3 or 4, which is the  
5 permit process and the application process to get on  
6 the pole. It talks about make-ready. It talks about  
7 advanced payment in many cases for the make-ready. It  
8 talks about the timing for release of the construction  
9 work order. It's usually very -- very early in the  
10 contract that all those things are set out.

11 Q. It's an industry standard rate to have --

12 A. I would.

13 Q. -- an application fee, right?

14 A. Yes.

15 Q. And to have the licensee pay for the  
16 make-ready costs required to attach to a pole?

17 A. Yes.

18 Q. Are you proposing this paragraph in lieu of  
19 those typical full attachment provisions?

20 A. I thought it was important that it's clear  
21 that the attachment rental doesn't cover those kinds  
22 of costs.

23 Q. What other costs?

24 A. Those are the ones that come to mind.

25 Q. In your proposed definition, you list --

1       you say, "And to perform other activities that the  
2       cooperative would not have to do but for the presence  
3       of TWC attachments."

4               What other activities?

5       A.       Periodic inventories. A five-year  
6       inventory of attachments is an example.

7       Q.       Would you agree it's industry standard for  
8       the parties to agree on some language about sharing  
9       costs for that type of inventory?

10      A.       It's -- it's in all the contracts I have  
11      been involved in when we are finished with them.

12      Q.       So those are typically addressed in the  
13      contract, right?

14      A.       Yes.

15      Q.       And typically, it requires the attachment  
16      party to pay for the inventory to the extent that its  
17      attachments are counted?

18               MR. VINROOT: Well, object --

19      BY MR. GEORGE:

20      Q.       Is that right?

21               MR. VINROOT: -- typical.

22      BY MR. GEORGE:

23      Q.       Is that industry standard?

24      A.       It's very common in the agreements, I -- I  
25      have been involved in, that the licensee pays for his

1 share of attachment inventory at periodic intervals.

2 Q. Based on the number of its attachments  
3 accounted in the inventory?

4 A. No, I disagree there. I would say, based  
5 on the number of poles in the area that the licensee  
6 serves, not the number of poles they are attached to.  
7 If we know how many poles they were attached to, we  
8 wouldn't be doing inventory.

9 So you take the licensee service area and  
10 you create a polygon around it, it's very easy to do  
11 now with GIS systems. And if in that area you look at  
12 5,000 poles, and 4,800 of them have licensee  
13 attachments on it, the licensee pays for the 5,000  
14 poles, one way or another. It's either baked into the  
15 rate, based on 4,800 poles, or it's based into the --  
16 baked into the rate. We are looking at 5,000 poles.  
17 And the cleanest, safest, easiest way is to say a rate  
18 per pole inspected are inventoried instead of a rate  
19 per pole with attachments.

20 Q. When you say it's "baked into the rate,"  
21 are you saying that the inspection costs are baked  
22 into the annual pole attachment rate?

23 A. I'm -- No. I'm saying -- I am sorry, that  
24 was a -- that was a -- not a good statement.

25 I'm saying that, if the charge is \$3 per

1 pole, with an attachment to do an inventory, and it's  
2 known that there are -- only about half the poles have  
3 an attachment on them at \$3 a pole becomes \$1.50 for  
4 every pole looked at.

5 Somebody doing an inventory can't look at a  
6 pole to determine whether or not it has an attachment  
7 without recovering its cost to doing that.

8 I may not be clear in what I'm saying  
9 but --

10 Q. But the parties typically would have a  
11 contact around that?

12 A. That is correct, yes.

13 Q. And the contract, typically, if it's not a  
14 payment based on the number of attachments, then it  
15 would typically be based on a polygon approach or  
16 another approach that you described that would try to  
17 identify the service area where the third-party  
18 attachment --

19 A. That's correct.

20 Q. -- attachments exist?

21 A. Yes. I interrupted. But that is correct.

22 I think we are saying the same thing. I  
23 just didn't want it to be on the record that I agreed  
24 that the rate ought to be per attachment found because  
25 there is an incentive when you do that to find a whole



1 bunch of attachments.

2 The better thing is to pay somebody per  
3 pole looked at, period, and then do a QC -- quality  
4 checks to make sure that they are properly identifying  
5 everything they are looking at. And then you are not  
6 driving them to find additional attachments or  
7 additional violations or additional transfers. Just  
8 how much per pole that you are going to look at.

9 Q. When you say that there is an incentive  
10 for -- you are talking about the company doing the  
11 attachment has an incentive to find more? Is that --  
12 doing the audit has incentive to find more  
13 attachments?

14 A. If you are paying the person based on the  
15 number of attachments they find, instead of the number  
16 of locations they look at, then they are going to try  
17 to find as many attachments as possible. You would  
18 hope they would do it either way. But the better way  
19 is to say, I want this part of my system inspected --  
20 inventoried. How much would you charge me per pole to  
21 go look at it? I want you to tell me how many  
22 attachments, how many violations, how many transfers,  
23 how many whatever. But this area has got this many  
24 poles. How much per pole?

25 Q. So we were talking about payment by the

1 licensee. And you are talking about now payment to  
2 the company conducting the inspection?

3 A. And they could be one in the same. If the  
4 licensee is paying for the cost of the inventory is a  
5 but-for cost, then I'm saying my experience is -- the  
6 more appropriate way to do it is on -- based on the  
7 number of poles looked at.

8 Q. Based on the total poles looked at?

9 A. That is correct.

10 Q. And the licensee would pay for the entire  
11 inspection?

12 A. I go back to what I said earlier. If -- if  
13 you've got to look at 2,000 poles and only 1,000 of  
14 them have attachments on it, you've got to have a rate  
15 that covers looking at all 2,000 poles.

16 Q. What if you know that only 20,000 poles  
17 have an attachment on it, but your system consists of  
18 60,000 poles, would that be reasonable to charge the  
19 attaching entity for the inspection of the entire  
20 system?

21 A. What you would want -- my proposal -- my  
22 belief is that you ought to look at everything at one  
23 time. You shouldn't do one licensee today in this  
24 area of your system, and then next year do another  
25 licensee, like the telephone company in that same area

1 of the system. And you pro rate the cost, based on  
2 what is found in that particular area on a per pole  
3 basis.

4 Q. Does the pole owner derive benefits from a  
5 systemwide inspection?

6 A. An inventory?

7 Q. Uh-huh (affirmative).

8 A. From an inventory? If there are unreported  
9 attachments and he gets his attachment records  
10 correct, yes. If you look for unsafe conditions at  
11 the same time, then those can be found, as well.

12 Q. Whether they are caused by the third-party  
13 attacher or caused by the utility itself, right?

14 A. Whatever -- whatever is in the scope of the  
15 inventory. Yes.

16 Q. Are there any other activities that you  
17 maintain are not recovered by an annual rental rate?

18 A. The ones that I mentioned are the ones that  
19 come to mind.

20 Q. Are there any others?

21 A. I -- there may be, but I can't think of  
22 them right now.

23 Q. If the commission were to approve this  
24 contract language, anybody could think of some other  
25 activity, right?

1           A.       Yes. I'm sure they could if they were of  
2       that character.

3           Q.       And that could lead to more disputes,  
4       right?

5           A.       The best is to get it in writing, agreed to  
6       by the parties and get a signature on it.

7           Q.       Would you agree that the standard terms  
8       that we talked about that would address application  
9       fees and make-ready fees and sharing of expenses for  
10      audits and inspections are the best way to address the  
11      but-for costs that you discussed?

12          A.       And things like make-ready when it's  
13      required on behalf of the licensee, those -- those  
14      would be but-for cost as well. But yes.

15          Q.       The best way to do that is to address it  
16      specifically in a contract?

17          A.       Absolutely.

18          Q.       Which is the standard approach?

19          A.       That is the best approach, in my opinion.

20          Q.       And it's actually the same approach that is  
21      taken in each of the contracts that are currently in  
22      effect between the parties in these proceedings,  
23      right?

24          A.       I would -- I haven't -- I read all of the  
25      contracts, but I can't remember exactly how they

1 address all those things.

2 MR. GEORGE: I may be done, but let's  
3 take a short break and let me review my  
4 notes.

5 MR. VINROOT: Sure.

6 MR. GEORGE: I'm done.

7 (Deposition concluded at 4:55 p.m.)  
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3 ) :ss  
4 COUNTY OF \_\_\_\_\_ )  
5  
6

7 I, WILFRED ARNETT, the witness  
8 herein, having read the foregoing  
9 testimony of the pages of this deposition,  
10 do hereby certify it to be a true and  
11 correct transcript, subject to the  
12 corrections, if any, shown on the attached  
13 page.  
14

15 \_\_\_\_\_  
16 WILFRED ARNETT  
17  
18  
19

20 Sworn and subscribed to before  
21 me, this \_\_\_\_\_ day of  
22 \_\_\_\_\_, 2017.  
23

24 \_\_\_\_\_  
25 Notary Public

I/A  
vol. 4 / vol 5

# EXHIBIT PDK 11

# ***POLE ATTACHMENTS***

by

**Ad Hoc Group of the  
706 Federal/State Joint Conference  
on Advanced Services**

**Presented at the  
2001 NARUC Summer Meetings  
in Seattle, Washington**

**July 2001**

This compilation was prepared by the Ad Hoc Committee of the Federal/State Joint Conference on Advanced Services. The views and opinions expressed herein do not state or reflect the view, opinions or policies of NARUC or any NARUC member Commissions. Inquiry regarding attachments can be made to John Mann of the Florida Public Service Commission; [jmann@psc.state.fl.us](mailto:jmann@psc.state.fl.us); 850-413-6976.

## **EXECUTIVE SUMMARY**

Pole attachment rates in this country are generally established by the Federal Communications Commission (FCC). These rates are approximately \$6 per pole attachment per year.<sup>1</sup> Due to recent court decisions, there is the potential that the FCC will be displaced as the arbiter of pole attachment rates for both Internet and wireless connections. Should the Supreme Court of the United States decide that the FCC has overstepped its authority, there is the potential that pole attachment rates could increase significantly. We believe this could have a detrimental effect on the deployment of advanced services to all Americans. If the FCC loses its jurisdiction over this rate setting activity, we believe the States should assert jurisdiction over pole attachments and maintain the currently established rate structure. We further believe that current rates are both fair and reasonable and that they promote facilities based competition. This paper contains a draft recommendation that model legislation from California may be considered by other States that may assume jurisdiction over the rate making process for pole attachments.

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<sup>1</sup> See pg. 8 for rate survey results.

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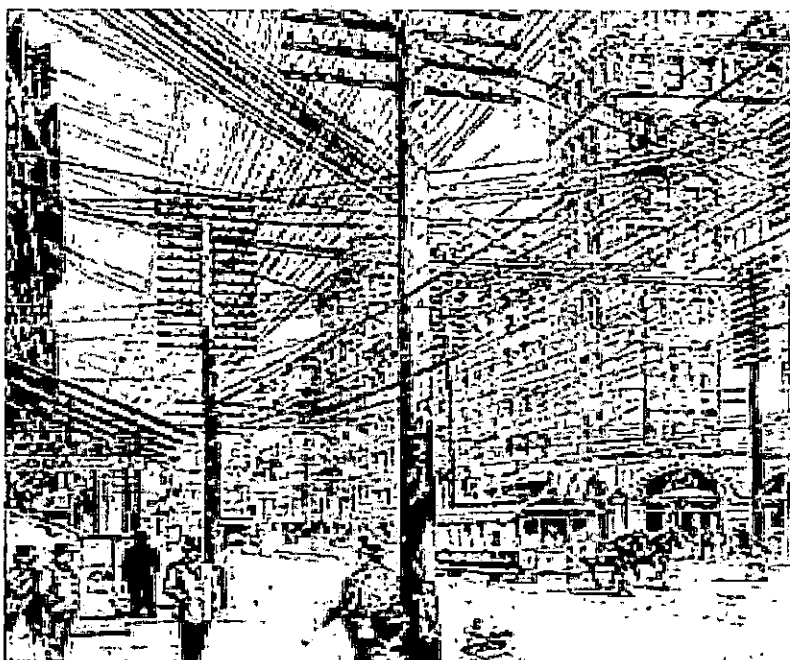


## **ACKNOWLEDGMENTS**

The Ad Hoc Committee would like to acknowledge those that were instrumental in the creation of this compilation and review on pole attachments: Paul Glist, nationally known expert on pole attachments contributed mightily to this project, Jovon Snipes, Laura Gilleland-Beck, and the staff at the Florida State University Law Library. All are to be commended for their contribution to this project, but more importantly, for their patience when dealing with an onslaught of repeated questions and misinterpretations.

## **DISCLAIMER**

In response to a resolution by the National Association of Regulatory Utility Commissioners (NARUC) Board of Directors, and sponsored by the Committee on Telecommunications, the following status paper and survey on pole attachments has been prepared. The Ad Hoc Committee would like it to be known that the opinions contained within this report are their own and that they do not represent the beliefs of any individual Commission or NARUC generally.



## INTRODUCTION

Testifying before the U.S. Senate on pole attachments, John E. Logan, Acting Chief of the FCC's Cable Services Bureau in 1998, stated:

Congress enacted Section 224 of the Communications Act to ensure that utilities' control over their infrastructure (poles, ducts, conduits and rights-of-way) would not create a bottleneck that stifled the growth of cable television. The 1996 Act expanded the scope of Section 224 to support access by telecommunications providers as well. Access to utility infrastructure at just and reasonable rates is critical to the development of competition in the

telecommunications and video markets. Without reasonable access, electric, phone and other utility infrastructure owners could effectively prohibit the entry of new providers to the market and stifle current providers in the delivery of new services. Section 224, and the Commission's implementation of the statutory provision, are therefore fundamental to the emergence of a competitive environment as they ensure access, particularly by new entrants. Section 224 also provides for increased compensation for utilities, so that they are appropriately compensated for this expanded use of their facilities. The Bureau is responsible for pole attachment rulemaking and enforcement and adjudicates complaints relating to access, rates, terms, and conditions of pole attachment agreements. This work benefits wireless and wireline telecommunications providers, pursuant to Section 703 of the 1996 Act, as well as data services companies and providers of video.

In agreement with these comments regarding infrastructure bottlenecks, the National Association of Regulatory Utility Commissioners passed the following resolution:

**WHEREAS**, Section 224 of the Communications Act of 1934, as amended (47 U.S.C. Section 224 "the Pole Attachment Act"), requires utilities to provide telecommunications carriers with non-discriminatory access to poles, ducts, conduits, and rights-of-way; and

**WHEREAS**, Prompt, nondiscriminatory access to poles, ducts, conduits and rights-of-way at reasonable rates, terms, and conditions is essential to the development of facilities-based competition, the deployment of state-of-the-art telecommunications services to the public and the implementation of facilities-based / broadband network redundancy to safeguard against network outages; and

**WHEREAS**, Carriers seeking to offer new facilities - based / broadband and other telecommunications services have reported an inability to obtain prompt, non-discriminatory access at reasonable rates and on reasonable terms and conditions from some utilities; and

**WHEREAS**, The failure of a utility to provide prompt, non-discriminatory access might be an insurmountable barrier to entry to new carriers offering innovative facilities-based / broadband and other services; and

**WHEREAS**, Pursuant to the Pole Attachment Act, the Federal Communications Commission (FCC) has jurisdiction to ensure that the rates, terms, and conditions governing access to poles, ducts, conduits and rights-of-way are just and reasonable and to hear complaints regarding the same, unless a state chooses to regulate such rates, terms, and conditions; and

**WHEREAS**, State Commissions have been at the forefront of implementing and enforcing open market requirements to ensure that all consumers have access to broadband communications services; and

**WHEREAS**, State Commissions have regulatory authority over utilities and the expertise to address the inability to receive non-discriminatory access to their poles, ducts, conduits and rights of way; now therefore be it

**RESOLVED**, That the National Association of Regulatory Utility Commissioners (NARUC), assembled in its November 2000 112th Annual Convention in San Diego, California, supports and recommends State Commissions consider asserting jurisdiction over the rates, terms and conditions governing access to poles, ducts, conduits, and rights-of-way; and be it further

**RESOLVED**, That NARUC establish an ad hoc committee to investigate the policies, practices and procedures of utilities, including those owned by a cooperative or by a state, county, municipality or other governmental or quasi-governmental body, regarding the provision of access to their poles, ducts, conduits, and rights-of-way and to submit its recommendations at the NARUC Winter Meeting 2001 regarding rules, regulations, policies and

incentives that State Commissions should adopt to further the goal of prompt, non-discriminatory access at reasonable rates; and be it further

**RESOLVED**, That NARUC urges State Commissions, to the maximum extent possible, to take all actions necessary to ensure that prompt, non-discriminatory access is provided to requesting carriers at reasonable rates and terms to guarantee access to facilities - based / broadband communications to all consumers.

The following report is an attempt to investigate the policies, practices, and procedures regarding the provision of access to poles, ducts, conduits and rights-of-way. To facilitate the determination of rules and regulations that State Commissions may consider to insure the goal of prompt, non-discriminatory access, the staff of the Ad Hoc Committee compiled the following:

- 1) State statutes currently in effect regarding access to poles, ducts, conduits and rights-of-way (referred to as "pole attachments" for the remainder of report).
- 2) State rules regarding access to pole attachments.
- 3) Survey of state rates for attachment.
- 4) Recent time line of FCC development of attachment rules and settlement of disputes.
- 5) Model State Legislation

At a time when legal uncertainty regarding attachment rates is becoming

pronounced, it is critically important that all States be prepared to step in to insure that fair rates are established and that the goals of the 1996 Telecommunication Act are fulfilled. Former FCC Commissioner Kennard stated:<sup>2</sup>

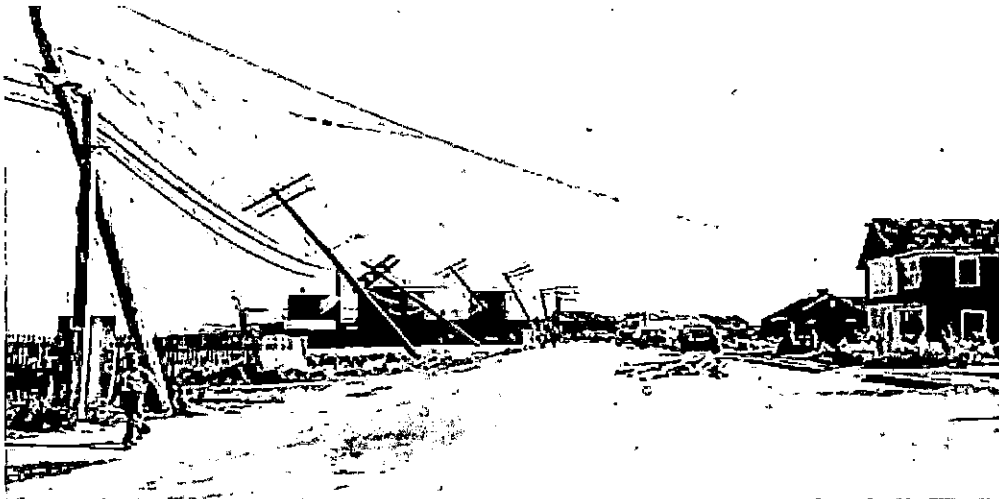
Those cut off from these high-speed networks today will find themselves cut off from the economic opportunities of tomorrow. And more importantly, they will be cut off from the most important network that there is -- the network of our national community. We must always be looking for ways to remove barriers to investment and to promote competition. I am particularly concerned about deployment in rural areas and in inner cities. Given the early stage of deployment of advanced telecommunications generally, it may seem difficult to discern the extent of the disparity between rural and urban areas. But today's Report suggests that in the very short term, demand for high bandwidth will really start to take off. My concern is that a geometric increase in demand may be mirrored by a geometric increase in the urban-rural disparity.

The Pole Attachment Act of 1978 and subsequent related FCC regulations were enacted in an attempt to open the bottleneck control of poles and conduit. Bottleneck control was being misused to constrain facilities-based competition. Today, the FCC has created a pricing mechanism that forestalls the need for protracted and expensive litigation among utility companies. As the enclosed survey indicates, a vast majority of the States determine pole attachment rates via this formula.

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<sup>2</sup> Separate Statement of Chairman Kennard, accompanying the Commission's Report on the Deployment of Advanced Telecommunications Capability to All Americans, CC Docket No. 98-146, released February 3, 1999.





### POLE REGULATION

Currently, 42 States follow the FCC's rules in handling pole attachments. Eight States and the District of Columbia have their own rules (see Attachment A). While States are permitted to "certify" their jurisdiction and regulate pole attachments directly, only 18, and the District of Columbia, have done so. They are:

Alaska

Massachusetts

California

Michigan

Connecticut

New Jersey

Delaware

New York

District of Columbia

Ohio

Idaho

Oregon

Illinois

Utah

Kentucky

Vermont

Louisiana

Washington

Maine

### FCC/STATE POLE ATTACHMENT RATES

Under FCC rules, to determine attachment rates, one must determine three things: 1) cost of the bare pole,<sup>3</sup> 2) cost of carrying charges,<sup>4</sup> and 3) the “use ratio.”<sup>5</sup> As of February 8, 2001, the rules have been altered to consider not only usable space, but to also allocate a portion of the cost related to unusable space (for telecommunication attachments). This rule change is being factored in over a five year period. Based upon the assumption that 3 parties attach to a pole, it is estimated that this change will result in rates going from \$5 to \$6 today to the mid-teens by 2006. The following charts (see the next five pages) detail the findings of a biennial census of attachment rents across the nation:<sup>6</sup>

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<sup>3</sup> Gross investment in pole plant, less the depreciation reserve for poles, less accumulated deferred taxes. Deduction is made for “pole appurtenances” that are of no value to the attacher, such as the cross-arms used for power lines.

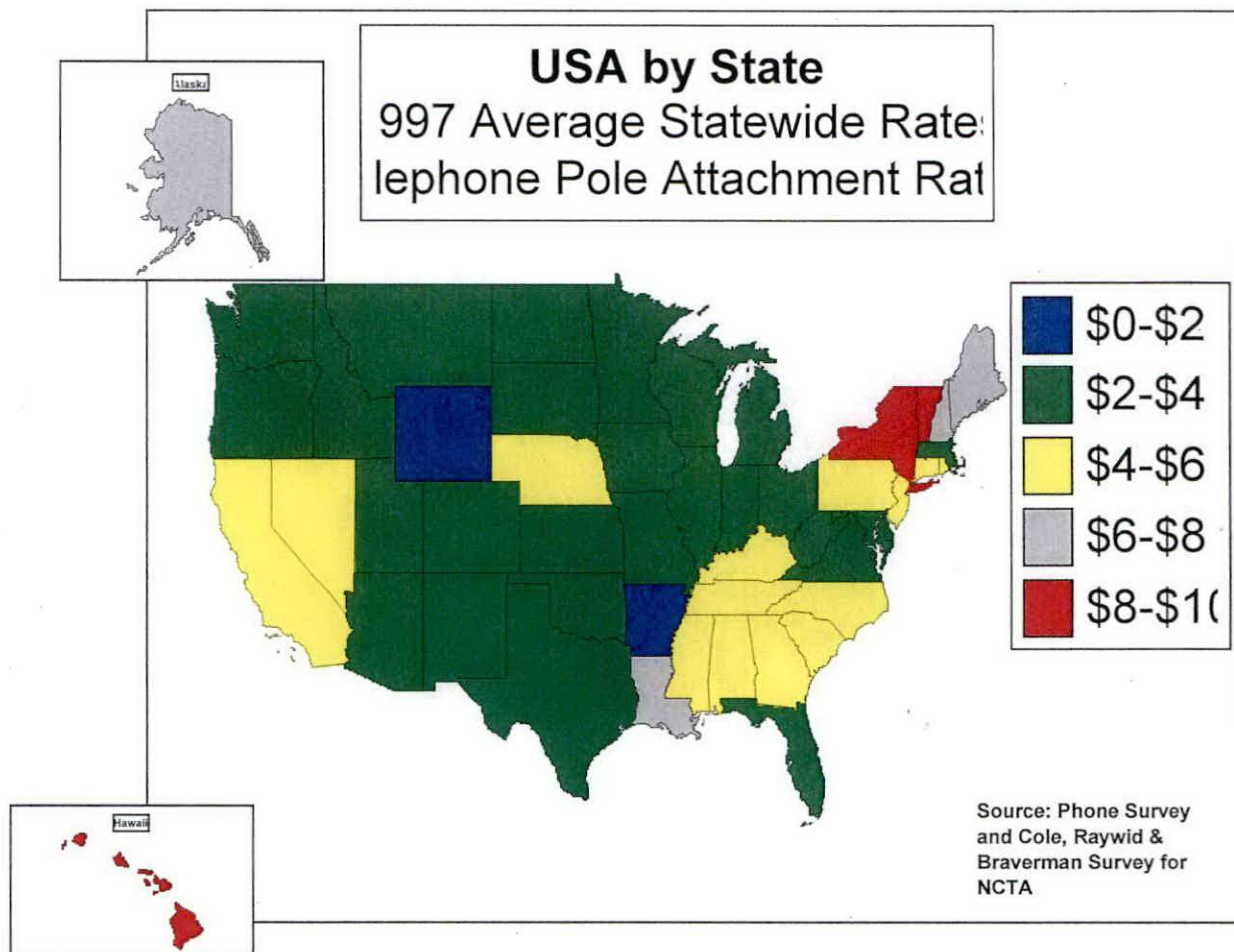
<sup>4</sup> Carrying charges include maintenance expense, depreciation expense, administrative expense, taxes, and a factor for state determined rate-of-return.

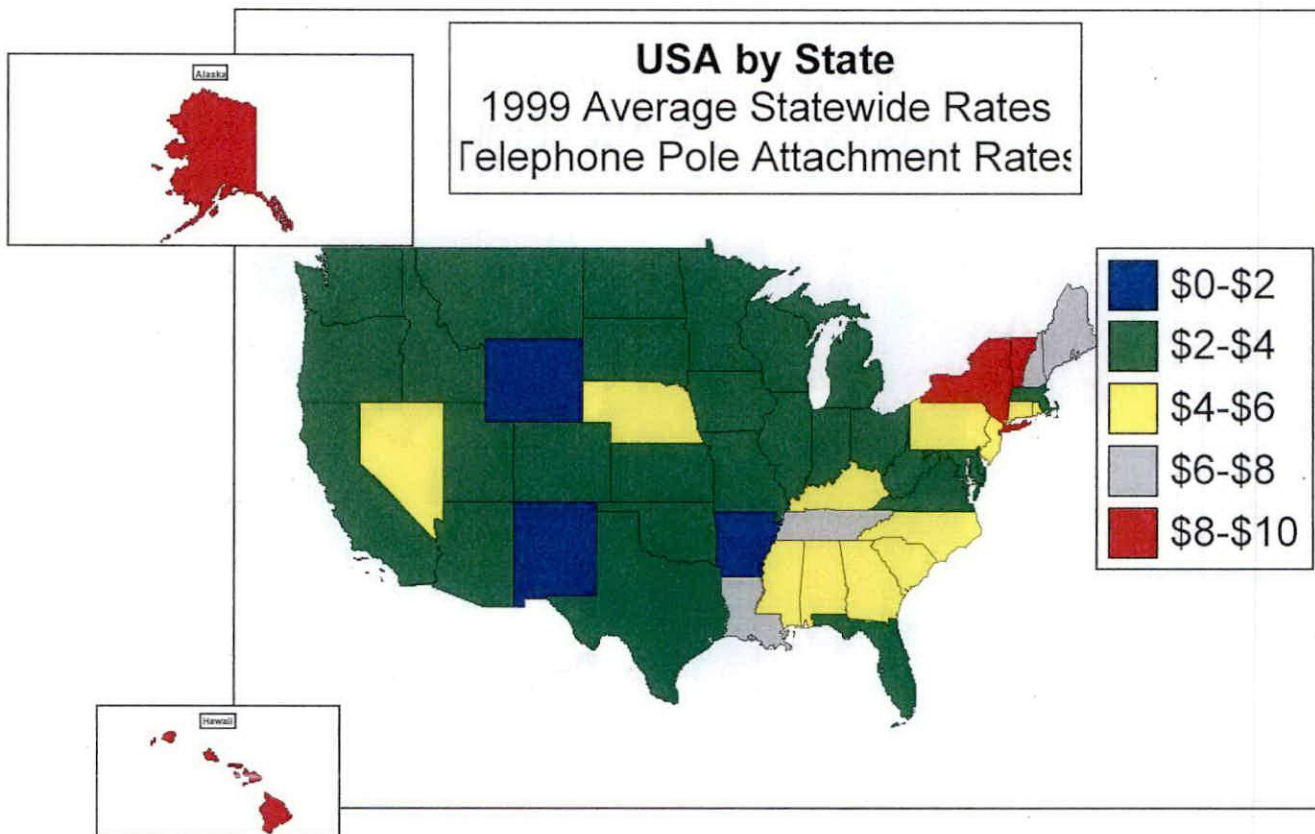
<sup>5</sup> The use ration is the portion of space occupied by an attachee. Presumptive calculations can be altered though the submittal of proper surveys and or inventory reports.

<sup>6</sup> Paul Glist, Cole, Raywid, and Braverman, 1919 Pennsylvania Ave., N.W., Suite 200, Washington, D.C. 20006-3458, [www.crblaw.com](http://www.crblaw.com).

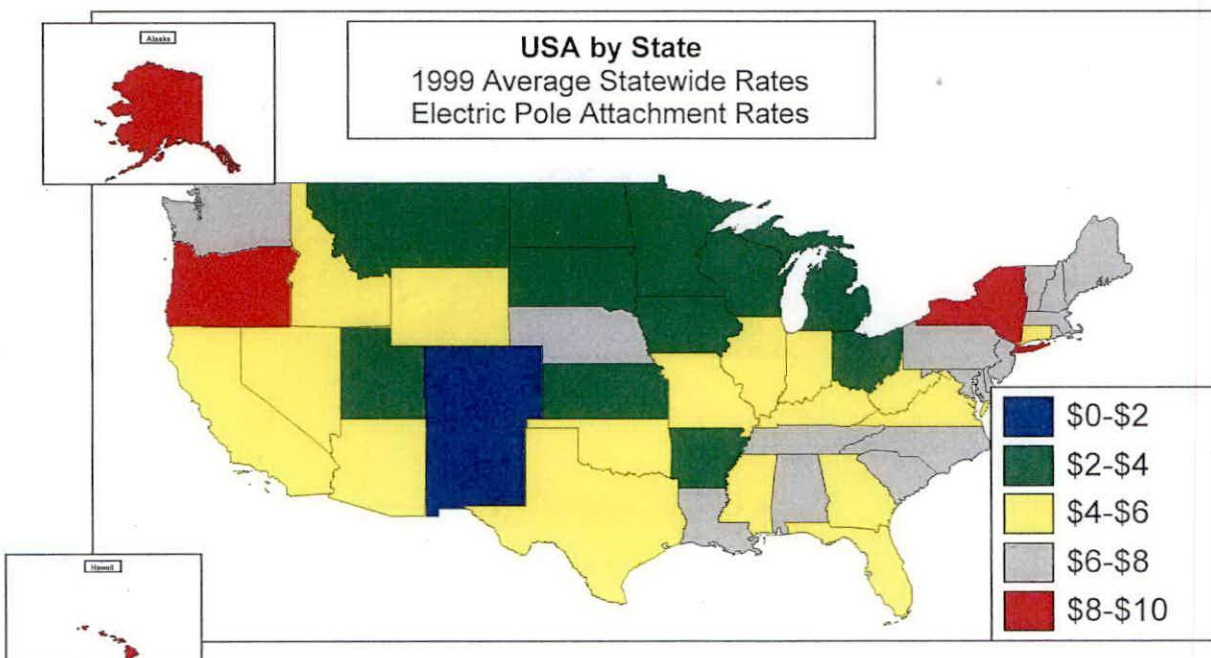
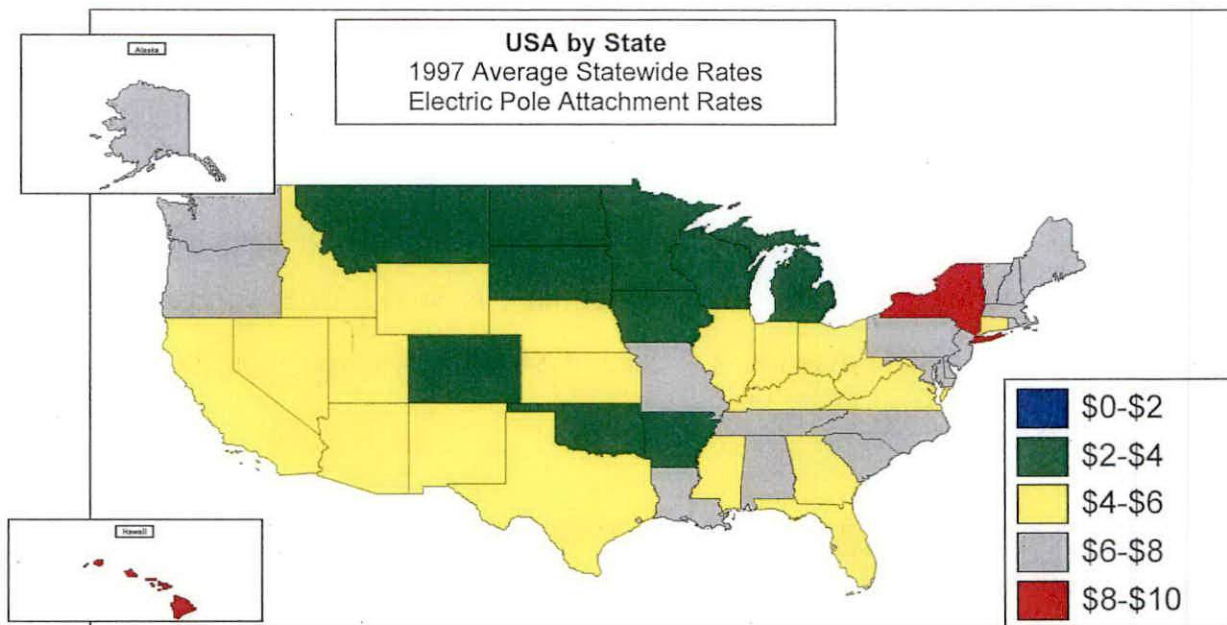
# 1997/1999 POLE RATE SURVEY ANALYSIS

State	Telephone			Electric		
	1997 State Average	1999 State Average	% Change	1997 State Average	1999 State Average	% Change
Alabama	\$4.01	\$5.17	28.93%	\$7.02	\$7.02	0.00%
Alaska	\$7.00	\$10.00	42.86%	\$7.00	\$9.01	28.71%
Arizona	\$3.50	\$3.35	-4.29%	\$5.20	\$4.61	-11.35%
Arkansas	\$1.99	\$1.99	0.00%	\$4.00	\$4.00	0.00%
California	\$5.18	\$3.40	-34.36%	\$5.61	\$5.26	-6.24%
Colorado	\$4.00	\$4.00	0.00%	\$3.44	\$1.72	-50.00%
Connecticut	\$5.83	\$5.83	0.00%	\$5.83	\$5.83	0.00%
Delaware	\$2.68	\$2.68	0.00%	\$7.30	\$7.30	0.00%
District of Columbia	\$2.57	\$2.57	0.00%	\$5.00	\$5.00	0.00%
Florida	\$3.54	\$3.99	12.71%	\$4.90	\$5.36	9.39%
Georgia	\$4.56	\$4.56	0.00%	\$5.79	\$5.79	0.00%
Hawaii	\$7.20	\$8.50	18.06%	\$8.50	\$8.50	0.00%
Idaho	\$2.76	\$2.76	0.00%	\$4.33	\$5.00	15.47%
Illinois	\$3.46	\$3.73	7.80%	\$4.16	\$4.20	0.96%
Indiana	\$3.75	\$3.75	0.00%	\$5.70	\$5.57	-2.28%
Iowa	\$2.75	\$2.75	0.00%	\$3.50	\$3.50	0.00%
Kansas	\$3.60	\$3.21	-10.83%	\$4.01	\$4.00	-0.25%
Kentucky	\$4.64	\$5.16	11.21%	\$4.97	\$4.97	0.00%
Louisiana	\$6.90	\$6.90	0.00%	\$6.16	\$6.56	6.49%
Maine	\$7.13	\$7.13	0.00%	\$7.20	\$7.50	4.17%
Maryland	\$2.21	\$2.21	0.00%	\$6.40	\$6.40	0.00%
Massachusetts	\$3.59	\$3.59	0.00%	\$6.66	\$6.80	2.10%
Michigan	\$3.47	\$3.47	0.00%	\$3.74	\$3.74	0.00%
Minnesota	\$3.13	\$3.13	0.00%	\$3.48	\$3.48	0.00%
Mississippi	\$4.94	\$4.71	-4.66%	\$5.20	\$5.77	10.96%
Missouri	\$3.94	\$3.39	-13.96%	\$6.44	\$4.72	-26.71%
Montana	\$2.50	\$2.50	0.00%	\$3.38	\$3.55	5.03%
Nebraska	\$4.58	\$4.50	-1.75%	\$5.77	\$6.12	6.07%
Nevada	\$4.38	\$4.38	0.00%	\$5.22	\$5.22	0.00%
New Hampshire	\$7.26	\$7.26	0.00%	\$7.61	\$7.61	0.00%
New Jersey	\$4.91	\$4.91	0.00%	\$6.73	\$6.73	0.00%
New Mexico	\$2.95	\$1.07	-63.73%	\$5.30	\$1.00	-81.13%
New York	\$9.43	\$9.43	0.00%	\$9.88	\$9.88	0.00%
North Carolina	\$4.45	\$4.45	0.00%	\$6.22	\$6.22	0.00%
North Dakota	\$2.75	\$2.75	0.00%	\$3.50	\$3.50	0.00%
Ohio	\$2.70	\$2.72	0.74%	\$4.09	\$4.00	-2.20%
Oklahoma	\$2.91	\$2.14	-26.46%	\$3.78	\$4.24	12.17%
Oregon	\$3.71	\$3.96	6.74%	\$7.12	\$8.12	14.04%
Pennsylvania	\$4.60	\$4.60	0.00%	\$6.80	\$6.80	0.00%
Rhode Island	\$4.98	\$4.98	0.00%	\$6.71	\$6.71	0.00%
South Carolina	\$4.41	\$4.41	0.00%	\$7.23	\$7.23	0.00%
South Dakota	\$2.75	\$2.75	0.00%	\$2.33	\$3.50	50.21%
Tennessee	\$4.57	\$6.18	35.23%	\$7.30	\$7.30	0.00%
Texas	\$3.00	\$2.58	-14.00%	\$4.05	\$4.06	0.25%
Utah	\$4.00	\$3.00	-25.00%	\$4.65	\$2.33	-49.89%
Vermont	\$9.06	\$9.06	0.00%	\$6.01	\$6.01	0.00%
Virginia	\$2.40	\$2.40	0.00%	\$4.39	\$4.39	0.00%
Washington	\$3.35	\$3.10	-7.46%	\$7.34	\$7.76	5.72%
West Virginia	\$3.73	\$3.73	0.00%	\$5.84	\$5.84	0.00%
Wisconsin	\$2.91	\$2.90	-0.34%	\$3.24	\$3.98	22.84%
Wyoming	\$1.85	\$2.00	8.11%	\$4.21	\$4.21	0.00%
<b>TOTALS</b>						
Average Rates	\$4.17	\$4.19	0.57%	\$5.49	\$5.45	-0.83%
Maximum Rates	\$9.43	\$10.00		\$9.88	\$9.88	
State	New York	Alaska		New York	New York	
Minimum Rates	\$1.85	\$1.07		\$2.33	\$1.00	
State	Wyoming	New Mexico		South Dakota	New Mexico	
<b>States Self Regulate</b>						
Average Rates	\$6.13	\$6.00	-2.10%	\$7.39	\$7.85	6.18%
<b>FCC Regulated</b>						
Average Rates	\$3.00	\$3.12	3.82%	\$4.37	\$4.02	-7.87%



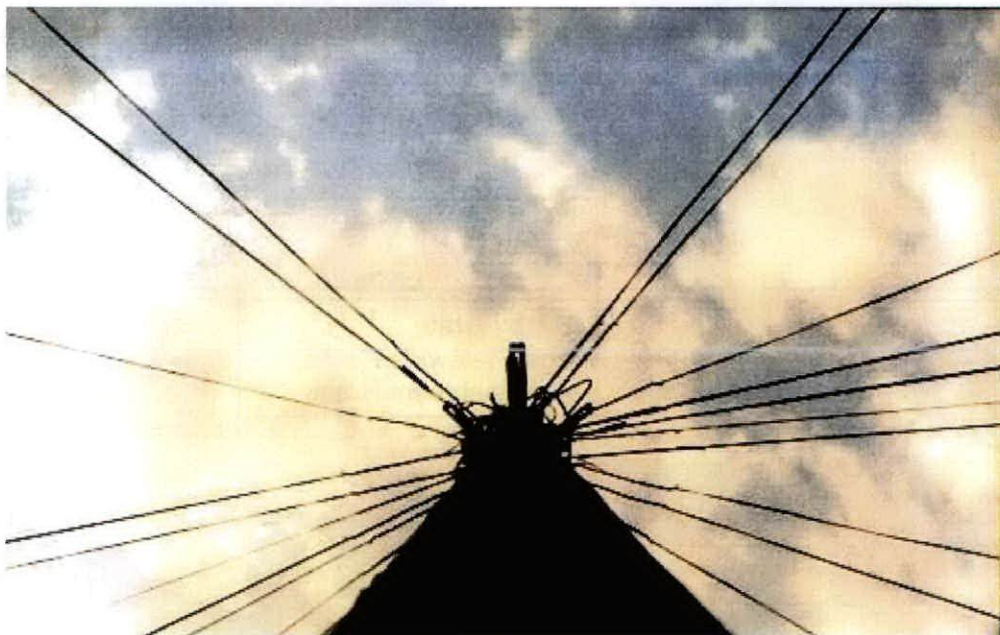






Based on an informal survey of State rates as of the end of 2000, there is not an appreciable difference between the rates charged in 1999 and those currently in effect.

The national average for pole attachment rates is \$4.19 for telephone and \$5.45 for electric. The average for States that self-regulate is \$6.00 for telephone and \$7.85 for electric. The highest state average is Alaska at \$10.00. The lowest in the country is New Mexico, at just over \$1.00.



### **SECTION 224 RULES**

Section 224 of the 1996 Telecommunication Act mandates nondiscriminatory access to the poles, ducts, conduits, and rights-of-way of telephone and electric utility companies at just and reasonable rates. The Act requires that pole owners can only deny access for reasons

of safety, reliability, and generally applicable engineering purposes.<sup>7</sup> Charges for attachment must be just, reasonable, and nondiscriminatory.<sup>8</sup> Pole attachment charges for telecommunication providers shall include both costs for usable and unusable space.<sup>9</sup> A utility must impute and charge its affiliates the pole attachment rates it charges others.<sup>10</sup>

At the FCC, an electric or telephone utility can only charge for the cost related to the portion of usable space that is occupied on the pole. However, as of February 8, 2001, telecommunications providers who wish to attach will also be assessed a portion of utility costs associated with the unusable space on the pole. This "telecommunications surcharge" does not apply to cable attachments. The new rate formula will be phased in over five years, but will take seven years before the provisions are fully effective.<sup>11</sup>

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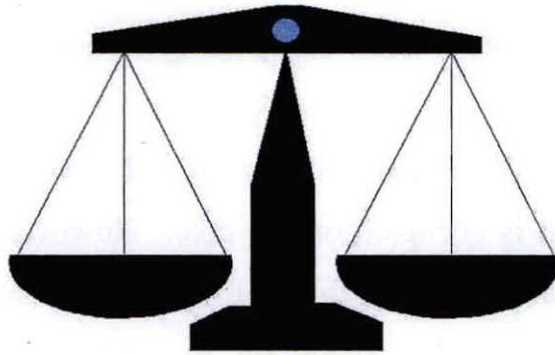
<sup>7</sup> Section 224(f) and 251(b)(4).

<sup>8</sup> Section 224(a)(5), (e)(1).

<sup>9</sup> Section 224(d)(1) - (3), (e)(1).

<sup>10</sup> Section 224(g)

<sup>11</sup> Electric Utilities and the Telecommunications Act of 1996, Alfred M. Momlet, pg. 5.



### **COURT ACTION**

In the 1960's, the telephone companies made aggressive moves against the cable industry through pole attachment rates and conditions. This had a detrimental effect on the deployment of cable services. Cable industry and consumer groups alike led an effort to get the FCC to assert authority over the regulation of pole attachments in an attempt to promote the deployment of cable service. This successful effort, along with the 1978 Pole Attachment Act, resulted in increased levels of deployment and investment in cable facilities. By eliminating monopolistic control over access and the imposition of unreasonable rates and charges, the cable industry was able to blossom.

Today we are threatened with history repeating itself. The players are different, now we have CLEC providers and power utilities, but the scenario is the same. While the ILEC industry generally accepted Congressional action on and FCC regulation of pole

attachments, the electric utilities have steadfastly fought these measures. Electric companies have repeatedly claimed that rates set by the FCC or individual States are insufficient and constitute a taking of private property under the takings clause.<sup>12</sup>

In a decision issued April 11, 2000, the United States Court of Appeals for the Eleventh Circuit addressed various aspects of the FCC's 1998 Pole Attachment Order implementing Section 224 of the Communications Act.<sup>13</sup> The court concluded that the FCC had no jurisdiction over pole attachments for wireless and Internet services.

Prior to the 1996 Act, Section 224 established principles governing the rates that could be charged by pole owners to cable operators who attached their facilities to utility poles, ducts, conduit and rights-of-way. The 1996 amendments to Section 224 added a mandatory access requirement to the statute, and also extended the statute to cover pole attachments by telecommunications carriers. The Eleventh Circuit affirmed a district court decision that Section 224(f) constitutes a taking of utility property, but that it is not unconstitutional because the statute provides for compensation to be set by the FCC, and for judicial review as a matter of right.

In *Gulf Power II*, the court addressed challenges to the FCC's implementation of Section 224, as distinct from the facial challenges to the statute itself in *Gulf Power I*. The court agreed with the electrical utilities that the FCC had exceeded its authority under

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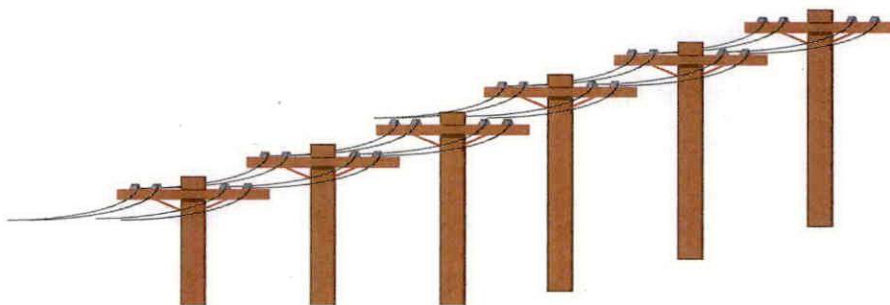
<sup>12</sup> Fifth Amendment of U.S. Constitution.

<sup>13</sup> See Attachment K.



Section 224 by claiming that wireless carriers have a right of access to utility poles under Section 224(f). Reading the access requirement of Section 224(f) in combination with the definition of utility in Section 224(a)(1), the court ruled that Congress clearly intended to give the FCC authority only over attachments for wire communications, and by negative implication, does not give the FCC authority over attachments to poles for wireless communications.

The court also agreed with the pole owners that the FCC has no jurisdiction with respect to attachments for Internet service. The court reasoned that Section 224 provides the Commission with authority to regulate rates for attachments “solely to provide cable service” and attachments to provide “telecommunications services.” Because the FCC has defined Internet services as information services, and not cable nor telecommunications services, the court ruled that the FCC did not have jurisdiction over these attachments. The case is now before the Supreme Court and a decision regarding FCC jurisdiction is expected early next year.



### **RECOMMENDATION**

First, the Ad Hoc group would recommend that immediate action is unnecessary and that we should await the Supreme Court’s decision in the Gulf Power II case. Should the court affirm the FCC’s role in rate setting over advanced services and wireless



attachments, then the nation can continue to rely on the regulations which have been developed to date.

Secondly, should the Supreme Court decide that the FCC has no rate setting jurisdiction over advanced services and wireless attachments, then the individual States should seriously consider passing legislation/rules that will allow State utility commissions to determine fair and reasonable rates for intrastate access to poles, ducts, and rights-of-way.

Thirdly, should more States assert jurisdiction over pole attachments rates, we believe it would be expedient to use the case proven rules of the FCC as a guideline. The FCC has resolved approximately 300 cases in 20 years of pole attachment regulation<sup>14</sup> and this body of casework should not be abandoned.

To frame the decision making process for rate setting, the following underlying principles should be considered:

- < presumption of "attach ability"
- < preclusion of subsidiary favoritism
- < prohibition against "reserving" space

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<sup>14</sup> Implementation of Section 703(e) of the Telecommunications Act of 1996, Amendment of the Commission's Rules and Policies Governing Pole Attachments, CS Docket No. 97-151 at pg. 8, n. 97.

- < reasonable time certain deadlines for handling applications and conducting make-ready preparations
- < permit "overlapping"
- < provide remedial tools to Commissions to deter discrimination and unreasonable denial of access
- < cooperative federalism between the FCC and the States

We also recommend that a single formula be determined and that the "telecommunications surcharge" currently in the FCC rules be eliminated.<sup>15</sup> For this reason, we are recommending that States use the California statute as a model for determining pole attachment rates; a model that sets one rate for both cable and telecommunications. The following details the California rule and further information can be found in Attachment J:

SECTION 767. Whenever the commission, after a hearing had upon its own motion or upon complaint of a public utility affected, finds that public convenience and necessity require the use by one public utility of all or any part of the conduits, subways, tracks, wires, poles, pipes, or other equipment, on, over, or under any street or highway, and belonging to another public utility, and that such use will not result in irreparable injury to the owner or other users of such property or equipment or in any substantial detriment to

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<sup>15</sup> See Attachment L

the service, and that such public utilities have failed to agree upon such use or the terms and conditions or compensation therefor, the commission may by order direct that such use be permitted, and prescribe a reasonable compensation and reasonable terms and conditions for the joint use. If such use is directed, the public utility to whom the use is permitted shall be liable to the owner or other users for such damage as may result therefrom to the property of the owner or other users thereof, and the commission may ascertain and direct the payment, prior to such use, of fair and just compensation for damage suffered, if any.

SECTION 767.5. (a) As used in this section: (1) "Public utility" includes any person, firm, or corporation, except a publicly owned public utility, which owns or controls, or in combination jointly owns or controls, support structures or rights-of-way used or useful, in whole or in part, for wire communication. (2) "Support structure" includes, but is not limited to, a utility pole, anchor, duct, conduit, manhole, or handhold. (3) "Pole attachment" means any attachment to surplus space, or use of excess capacity, by a cable television corporation for a wire communication system on or in any support structure located on or in any right-of-way or easement owned, controlled, or used by a public utility. (4) "Surplus space" means that portion of the usable space on a utility pole which has the necessary clearance from other pole users, as required by the orders and regulations of the commission, to allow its use by a cable television corporation for a pole attachment. (5) "Excess capacity" means volume or capacity in a duct, conduit, or support structure other than a utility pole or anchor which can be used, pursuant to the orders and regulations of the commission, for a pole attachment. (6) "Usable space" means the total distance between the top of the utility pole and the lowest possible attachment point that provides the minimum allowable vertical clearance. (7) "Minimum allowable vertical clearance" means the minimum clearance for communication conductors along rights-of-way or other areas as specified in the orders and regulations of the commission. (8) "Rearrangements" means work performed, at the request of a cable television corporation, to, on, or in an existing support structure to create such surplus space or excess capacity as is necessary to make it usable for a pole attachment. When an existing support structure does not contain adequate surplus space or excess capacity and cannot be so rearranged as to create the required surplus space or excess capacity for a pole attachment, "rearrangements" shall include replacement, at the request of a cable

television corporation, of the support structure in order to provide adequate surplus space or excess capacity. (9) "Annual cost of ownership" means the sum of the annual capital costs and annual operation costs of the support structure which shall be the average costs of all similar support structures owned by the public utility. The basis for computation of annual capital costs shall be historical capital costs less depreciation. The accounts upon which the historical capital costs are determined shall include a credit for all reimbursed capital costs of the public utility. Depreciation shall be based upon the average service life of the support structure. As used in this paragraph, "annual cost of ownership" shall not include costs for any property not necessary for a pole attachment.

(b) The Legislature finds and declares that public utilities have dedicated a portion of such support structures to cable television corporations for pole attachments in that public utilities have made available, through a course of conduct covering many years, surplus space and excess capacity on and in their support structures for use by cable television corporations for pole attachments, and that the provision by such public utilities of surplus space and excess capacity for such pole attachments is a public utility service delivered by public utilities to cable television corporations. The Legislature further finds and declares that it is in the interests of the people of California for public utilities to continue to make available such surplus space and excess capacity for use by cable television corporations.

(c) Whenever a public utility and a cable television corporation or association of cable television corporations are unable to agree upon the terms, conditions, or annual compensation for pole attachments or the terms, conditions, or costs of rearrangements, the commission shall establish and enforce the rates, terms, and conditions for pole attachments and rearrangements so as to assure a public utility the recovery of both of the following: (1) A one-time reimbursement for actual costs incurred by the public utility for rearrangements performed at the request of the cable television corporation. (2) An annual recurring fee computed as follows: (A) For each pole and supporting anchor actually used by the cable television corporation, for a period of four years following the effective date of this section, the annual fee shall be two dollars and fifty cents (\$2.50). Thereafter, the annual fee shall be two dollars and fifty cents (\$2.50) or 7.4 percent of the

public utility's annual cost of ownership for the pole and supporting anchor, whichever is greater, except that if a public utility applies for establishment of a fee in excess of two dollars and fifty cents (\$2.50) under this section, the annual fee shall be 7.4 percent of the public utility's annual cost of ownership for the pole and supporting anchor. (B) For support structures used by the cable television corporation, other than poles or anchors, a percentage of the annual cost of ownership for the support structure, computed by dividing the volume or capacity rendered unusable by the cable television corporation's equipment by the total usable volume or capacity. As used in this paragraph, "total usable volume or capacity" means all volume or capacity in which the public utility's line, plant, or system could legally be located, including the volume or capacity rendered unusable by the cable television corporation's equipment.

(d) In the event that it becomes necessary for the public utility to use space or capacity on or in a support structure occupied by the cable television corporation's equipment, the cable television corporation shall either (1) pay all costs for rearrangements necessary to maintain the pole attachment or (2) remove its cable television equipment at its own expense.

SECTION 767.7.(a) The Legislature finds and declares all of the following: (1) The Legislature has encouraged, and continues to encourage, the rapid and economic development of telecommunications services to all Californians. (2) Pursuant to Section 767.5, public utilities have dedicated a portion of their support structures to cable television corporations which have been increasingly attaching fiber optic cable that is capable of a variety of telecommunications uses. Other utilities not under the jurisdiction of the commission have also made the same dedication. (3) Public utility and publicly owned utility support structures are also used by entities, other than cable television corporations, with the acquiescence of the public utility and voluntary permission of the publicly owned utility, for the purpose of installing fiber optic cable in order to provide various telecommunications services. (4) Electric public utilities are currently installing fiber optic cables on their systems to enhance their operations and better serve their customers. Fiber optic cables installed by telephone, cable, and other telecommunications corporations may be accessed by electric public utilities and publicly owned utilities to enhance their operations and better serve their customers. The

access may be accomplished by contract or through the purchase of tariffed services.

(b) It is therefore the intent of the Legislature that public utilities and publicly owned utilities be fairly and adequately compensated for the use of their rights-of-way and easements for the installation of fiber optic cable, and that electric public utilities and publicly owned utilities have the ability, if they so desire, to negotiate a purchase, lease, or rent of access to those fiber optic cables for their own use.

(c) Nothing in this section shall be deemed to change existing law with respect to Section 767.5.

The simplicity of the California method is that there is only one pole attachment formula and this calculation can be easily made from readily available information.<sup>16</sup> Since the opening of the local exchange market to competition, various cable operators now offer telecommunication services over the same connections used for cable television service. There is generally no difference in the physical connection to the poles or conduits attributable to the particular service involved. In many cases, a cable operator may not be able to delineate exactly what particular services are being provided to a customer at a given time, since the customer can use the connection for various services, depending on the equipment attached at the customer's premises. In such instances, it would be difficult and impractical to police how a given pole attachment is used to provide separate services offered over the same pole connection, or to delineate what portion of the usage was attributable to telecommunications versus other services offered by the cable company. Accordingly, to avoid the problems involved in separately measuring different

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<sup>16</sup> Each cost element is recorded in the ARMIS accounts (telephone) and FERC Form 1 Accounts (power). Pole ownership numbers can be obtained from continuing property records. Deprecation and rate-of-return rates can be obtained from individual state commissions.



types of data transmission services over the same connection, we conclude that the formula prescribed by California rule for cable television pole attachments could apply uniformly to cable, Internet and telecommunications services. By applying a consistent formula for all attachments, one would hope to avoid protracted disputes over how particular attachments are being used or how separate rates will be prorated among different volumes of transmissions over the same connection. California appears committed to ensuring that all telecommunications carriers gain access to utility attachments under nondiscriminatory rates, terms, and conditions. They have concluded that all CLECs should be entitled to comparable pole attachment rates as are available to those CLECs affiliated with or owned by a cable, phone or electric company. They believe the use of the existing cable pole attachment rate for all CLECs will also avoid the need for further protracted proceedings requiring expensive cost studies. California has directed that the same pole attachment rate provisions applicable to cable operators providing telecommunications services be extended to all CLECs, including those not owned by or affiliated with a cable corporation.<sup>17</sup>

Currently, the FCC's authority does not extend to ILEC attachments on power poles.<sup>18</sup> We recommend that the pole attachment formula also be applied to ILECs since they are essentially "pole renters" outside of their home service area. With the right price and open access, all viable competitors should be able to access the "last mile," be they IXC, ILECs, ALECs, or CLECs.

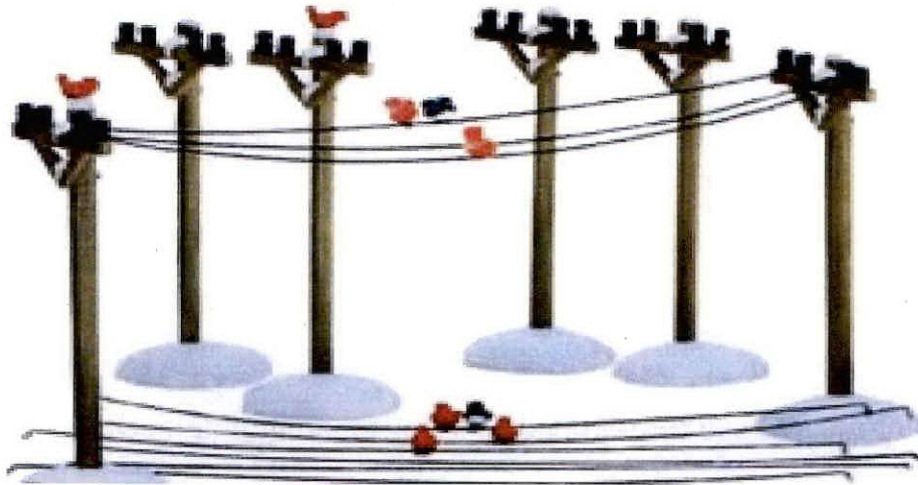
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<sup>17</sup> California Order Instituting Rulemaking on the Commission's Own Motion Into Competition for Local Exchange.

While it would be politically difficult to accomplish, this standard rule and rate mechanism could also be applied to both municipalities and cooperatives. As both of these organizations begin to become involved in the telecommunications business and in the provision of broadband services, they should not be able to hold their citizens or constituents hostage to a single provider. The necessity of providing these groups an exemption from pole attachment rules has diminished considerably and true competition will dictate that all the competitors, in all areas, have an equal opportunity to provide service. Islands of regulatory exception will only serve to segregate market development (see Attachment G).

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<sup>18</sup> City of Abilene vs. FCC, No. 97-1633 and No. 97-1634, Petition for Reconsideration, February 19, 1999, pg. 3.



### **OTHER ISSUES**

Nondiscriminatory access should be required to any pole. Certain engineering and safety concerns could restrict access, but there should be a presumption of accessibility that could only be overcome through a credible demonstration by the pole owner. Time certain deadlines for handling applications and make-ready should be imposed. Effective sanctions should be put in place to ensure timely adherence to enacted regulation.

For rearrangement inspection and make-ready costs, the attacher should only be responsible for actual and reasonable costs. The new attacher should only be responsible for the costs of necessary make-ready changes and should not be held liable for any cost to correct pre-existing safety violations.

It should be illegal for a pole owner to require that lines be deeded to the utility, or that pole owners can require that only their employees or their independent contractors can conduct attachment work. It should also be illegal to preclude overlashing, unless there is a credible showing that restriction is warranted for reasons of safety or engineering capacity. Eviction from poles should only be allowed following a showing of just cause

and with specific authorization of the State commission.

Companies such as Gemini Networks<sup>19</sup> need reasonable access to poles to build their network. They claim that “securing pole access is a slow, burdensome process despite nondiscriminatory access requirements.”<sup>20</sup> Gemini claims that the turn around time for processing make-ready invoices and paying ILECs is between one and two days. Gemini states that the average turn-around time for granting pole licenses is 141 days (45 day federal limit).<sup>21</sup> Rules should include certain deadlines and sufficient sanction to promote compliance.<sup>22</sup>

Pole owners may require applicants to post a security bond prior to submittal of a license application. This “bond barrier” should not be permitted unless there is a credible basis for concluding that the applicant may not be able to satisfy its obligations. Bonding requirements should be based on a demonstrated history of late or non-payment. There should be a nexus between the bond requirement and the costs that the pole owner will incur.

Pole owners should not be permitted to recover the costs of correcting pre-existing pole violations solely from new licensees. The costs to correct these violations should be

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<sup>19</sup> [www.gemnets.com](http://www.gemnets.com). Note: Reed Hundt is on the Board of Directors.

<sup>20</sup> Gemini Networks presentation, July 2000, pg. 18.

<sup>21</sup> *Id.* pg. 19.

<sup>22</sup> See Attachment M.

assessed on the existing attachers and not to the new licensee. Pole attachment agreements should include conditions which specify a method for allocating the costs of modifications among the different parties. Parties effected should also be able to recoup a portion of these costs from subsequent licensees who benefit from required modifications.

Pole owners should only be permitted to recover reasonable, documented and verifiable costs for field survey work. In order to avoid excessive make-ready expense, only reasonable and actual expense should be allowed. Fees should be adequately substantiated and flat per-pole fees should not be allowed, as they usually have little relation to the actual costs to be incurred. Charges for field surveys and the preparation of make-ready estimates should be fully disclosed in advance. Billing for service should only take place upon completion of the work and determination of actual costs.

Pole owners should streamline state wide agreements for pole attachments. It is inefficient to have separate agreements for different areas within a state and can lead to unnecessary expense for the attachers. There should be a single agreement that covers all areas controlled by a utility.

License applications differ significantly among different pole owners and even differ in separate areas controlled by a single utility. Pole owners, to as great an extent as possible, should adopt a uniform license application. While unique local circumstances may necessitate special language in a application, the majority of conditions for these applications can be standardized in an attempt to expedite the process and minimize the cost.

In order to facilitate the application process, pole owners should be required to provide license applicants access to their maps and other information that could expedite the application process. This information can be invaluable to license applicants who are required to specify the poles, conduits and rights-of-way to which they require access. Making each potential attacher "rediscover" information that is already compiled by the pole owners is expensive and redundant.

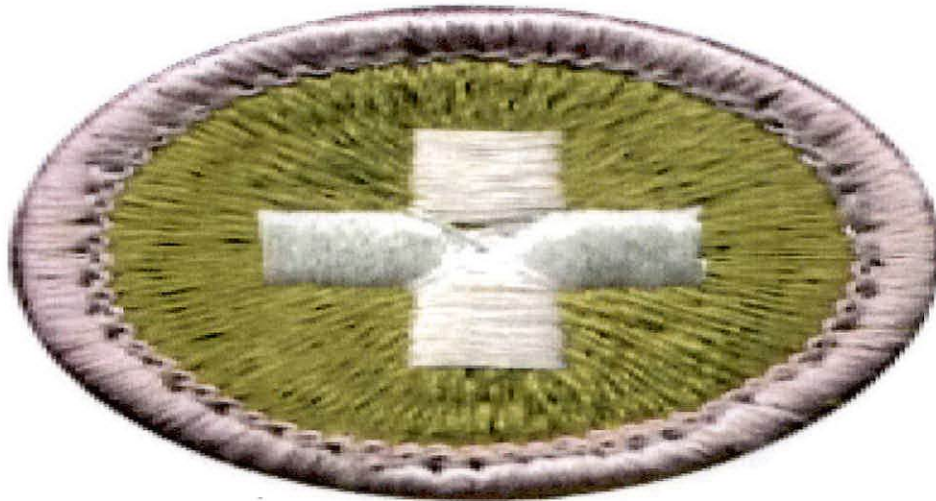
Pole owners should not unilaterally impose artificially low limits on the number of applications that may be filed at one time. Unreasonable restrictions on the number of applications can prevent the rapid deployment of new networks.

Pole owners should be required to give sufficient advanced notice to existing attachers that modifications to poles is planned. With this knowledge, attachers can gauge the potential savings of making concurrent modifications to their attachments.

In situations where poles are jointly owned, these parties should process license applications in a coordinated fashion and only require that one application and one application fee be submitted. Joint owners should be required to work together to avoid unnecessary delays and to coordinate their decision making process.

We also recommend that rates and terms agreed upon by the parties should either be readily available in tariffs, or in the alternative, allow the contracts to be posted on the Internet so that all parties will have an opportunity to verify charges and adopt contract solutions on a nondiscriminatory basis.





### **PUBLIC SAFETY**

Poles go up. Poles come down. In an attempt to protect the public from faulty pole construction or attachments, a number of jurisdictions in the United States have developed programs for pole inspection. Be it reliance on internal utility inspection, building code inspectors, or reporting of pole problems by rate payers, it is vitally important that these facilities be monitored. Several States have instituted online reporting of pole problems.<sup>23</sup> See Attachment I for further information on the Florida inspection program.

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<sup>23</sup> <http://homepages.go.com/~samait/forms/technology.htm>.

## CONCLUSION

Today, cable and telephone companies face a challenge to their monopoly local exchange market from facilities based competitors that must attain access to poles and conduits. The incentives for incumbents to impede competition, be it through action at the FCC, unreasonable business practice, or court action, has magnified in the last few years.

The purpose of the 1996 Act is to encourage investment in competing facilities. If pole rents are artificially high, the cost of line extensions becomes uneconomic. This can dramatically effect all areas, especially rural areas with lower density of subscribers and greater number of poles per customer. Lower pole attachment rates are an incentive to attract facilities based competition. Lower, yet reasonable, attachment rates will allow cash strapped CLEC's the opportunity to reinvest revenue in facility upgrades instead of paying rent. When determining fair rent for pole attachment, one should always be cognizant of the fact that pole and conduit facilities are frequently recovered through regulated rates, or in other words, already in rate base. Add to this equation the fact that a vast majority of these poles sit on right-of-way that was either fully contributed to the utility or leased at a discounted rate. Considering these factors, one begins to understand that the general public has an ownership interest in these poles and should benefit accordingly. Be it the benefit of greater facilities based competition, the benefit of rapid deployment of advanced services or be it the public benefit of avoiding expensive litigation costs, a mechanism must be maintained that ascertains a reasonable rate for pole attachment and provides an efficient method for complaint resolution. We believe this has already been accomplished at the FCC.

When it comes to pole attachments, why don't the utilities agree? Well, it's because there is an incentive for pole owners who want to get into the telecommunications and Internet business to forestall the efforts of others. It's not so much the rate of the rent, but rather how much time can be gained by erecting a cost barrier. For power companies, pole rental income is a rounding error on their financial statements. But, if they can corner a telecommunications market with their monopoly position over the "last mile," they could significantly improve their bottom line. There is abundant incentive to overprice, delay, and or file court action if these tactics will buy time for pole owners to develop a broadband business plan. This is fundamentally unfair to those currently implementing a business plan of their own and to the public who is victimized by retarded deployment of advanced services. Stewardship of public resources should be the primary concern of pole owners and policy makers alike. Increasing the rent for these resources by as much 600% is neither fair to competitors nor to the public.<sup>24</sup>

The potential economic effect of pole attachment rates has been described by some commentators as the "biggest sleeper" issue in telecommunications. If the owners of the estimated 90 million poles<sup>25</sup> in America were able to charge \$38 per pole attachment, as requested by Gulf Power in Northwest Florida,<sup>26</sup> instead of the national average of \$6, the annual impact could be as great as \$3 billion per year. Increased costs such as these could adversely affect economic development, educational opportunities and the quality of life in

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<sup>24</sup> See Attachment H.

<sup>25</sup> Robert Guy Matthews, The Wall Street Journal. Four million poles per year need to be replaced because of routine maintenance, accidents and construction.

the entire nation. Quantifying the effects of inhibited competition is difficult, if not impossible to do, but it is easy to understand that issues involving the deployment of advanced services and access to last mile infrastructure are of paramount importance.

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<sup>26</sup> See Attachment H.

I/A  
M4/M5

# EXHIBIT PDK 12

### ***Resolution Regarding Pole Attachment Policy***

**WHEREAS**, The National Association of Regulatory Utility Commissioners (NARUC) strongly supports the implementation of federal and State telecommunications policies which facilitate the deployment of advanced communications products and services throughout the United States, protect the safety and reliability of the nation's critical electric infrastructure, and preserve the prerogatives of the States to ensure safety, reliability and engineering standards; *and*

**WHEREAS**, The Federal Communications Commission (FCC) has found that advanced telecommunications continues to play a critical role in the economy of the United States and in American life; and Congress requires that the FCC "take immediate action to accelerate deployment of such capability by removing barriers to infrastructure investment and by *promoting competition* in the telecommunications market;" *and*

**WHEREAS**, The FCC recently reconvened the Federal-State Joint Conference on Advanced Services (Joint Conference). The Joint Conference was originally formed in 1999 as part of the FCC's ongoing efforts to ensure that advanced services are deployed as rapidly as possible to all Americans. The Joint Conference serves as a forum for an ongoing dialogue among the Commission, State regulators, and local and regional entities regarding the deployment of advanced telecommunications capabilities; *and*

**WHEREAS**, State Commissions have a mutual and long-standing commitment to adopt in conjunction with the FCC policy to facilitate the deployment of advanced services by removing barriers and promoting technology neutral solutions; *and*

**WHEREAS**, NARUC's Committee on Telecommunications convened a panel discussion on pole attachment policy during the 2008 Winter Meetings in Washington, D.C. The diverse panel of stakeholders acknowledged the rights of communications providers under the FCC's jurisdiction to attach to utility distribution poles under Section 224 of the Telecommunications Act and the efficiencies provided in relation to this existing infrastructure in order to accelerate deployment of advanced communications products and services; *and*

**WHEREAS**, NARUC recognizes that certain States have certified to the FCC that they regulate pole attachments, while other States rely on the FCC to govern and resolve issues among parties; *and*

**WHEREAS**, Certain States have had and continue to have significant success with the adoption of technology neutral pole attachment policy and in effect the use of pole attachments to facilitate the delivery of competitive products and services to consumers; *and*

**WHEREAS**, Certain States have acknowledged the significant auxiliary benefit of using utility distribution poles for the siting of communication equipment to improve communications among first responders and public safety; *and*

**WHEREAS**, Some States have noted the use of utility distribution poles as a means to site communications equipment and as a means to balance consumer requests for access to products and services while utilizing more environmentally sound and aesthetically pleasing practices; *and*



**WHEREAS**, It is generally accepted among regulators that the attachment of communications equipment to distribution poles can be done in accordance with FCC rules, State-specific safety rules and the U.S. Occupational Safety and Health Administration (OSHA) guidelines; *now, therefore, be it*

**RESOLVED**, That the Board of Directors of the National Association of Regulatory Utility Commissioners (NARUC), convened at its 2008 Summer Meetings in Portland, Oregon, directs the General Counsel of NARUC to compile, by the best means available, a report on the status of pole attachment regulation across the United States including a comprehensive list of appropriate "best practices" which could be employed by other States in an effort to advance policies which would further facilitate the deployment of advanced services by attaching communications equipment to utility distribution poles; *and be it further*

**RESOLVED**, That NARUC staff shall report on the completed report, consistent with this resolution, at the 120<sup>th</sup> Annual Convention in New Orleans, Louisiana.

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*Sponsored by the Committee on Telecommunications  
Adopted by the Board of Directors July 23, 2008*

I/A  
w14 / w13

# EXHIBIT PDK 13

**Before The  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Implementation of Section 224 of the	)	WC Docket No. 07-245
Act; Amendment of the Commission's	)	
Rules and Policies Governing Pole	)	RM-11293
Attachments	)	RM-11303

**REPLY COMMENTS OF THE  
NATIONAL ASSOCIATION OF STATE UTILITY CONSUMER ADVOCATES**

On November 20, 2007, the Federal Communications Commission ("FCC" or "Commission") released a Notice of Proposed Rulemaking ("NPRM") seeking comment on the Commission's implementation of 47 U.S.C. § 224, which confers on cable television systems and telecommunications carriers the right to pole attachments at just and reasonable rates, terms and conditions.<sup>1</sup> After publication in the Federal Register,<sup>2</sup> the comments of a multitude of entities were filed on March 7, 2008.

Having reviewed most of the dozens of comments, the National Association of State Utility Consumer Advocates ("NASUCA")<sup>3</sup> submits these brief reply comments.<sup>4</sup> NASUCA finds itself in perhaps a unique position among the commenters. NASUCA members represent the customers of the companies -- providing cable television service, telecommunications

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<sup>1</sup> FCC 07-187. Pursuant to the statute, the FCC regulates pole attachment rates except where they are regulated by the states. *Id.*, ¶ 4.

<sup>2</sup> 73 FR 6879 (February 6, 2008).

<sup>3</sup> NASUCA is a voluntary, national association of consumer advocates in more than 40 states and the District of Columbia, organized in 1979. NASUCA's members are designated by the laws of their respective states to represent the interests of utility consumers before state and federal regulators and in the courts. *See, e.g.*, Ohio Rev. Code Chapter 4911; 71 Pa. Cons. Stat. Ann. § 309-4(a); Md. Pub. Util. Code Ann. § 2-205(b); Minn. Stat. Ann. Subdiv. 6; D.C. Code Ann. § 34-804(d). Members operate independently from state utility commissions, as advocates primarily for residential ratepayers. Some NASUCA member offices are separately established advocate organizations while others are divisions of larger state agencies (*e.g.*, the state Attorney General's office). Associate and affiliate NASUCA members also serve utility consumers, but have not been created by state law or do not have statewide authority.

<sup>4</sup> Pursuant to DA 08-582, the reply comment date was extended to April 22, 2008.

services, and broadband service -- that attach to poles.<sup>5</sup> In that respect, NASUCA members are interested in keeping the costs of pole attachments down, so as to keep the costs of the services provided through the pole attachments down. But NASUCA members also represent the customer of the utilities to which the attachments are made. In that respect, NASUCA members are interested in ensuring that pole attachment rates appropriately compensate the owners of the poles, so that other services are not required to subsidize the attachments.<sup>6</sup> That dual perspective informs these reply comments, which focus on general principles rather than delving into many of the specific questions raised in the *NPRM*.

Initial comments were filed by all manner of "pole attachers" and "pole attachees." The "attachers" included those whose principal business is telecommunications,<sup>7</sup> and those whose principle business is cable television.<sup>8</sup> These two groups are increasingly involved in each other's business, and both groups typically provide broadband service.<sup>9</sup> The "attachees" were

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<sup>5</sup> As the *NPRM* notes, "the definition of a 'pole attachment' for purposes of section 224 ... include[s] not only poles but also 'any attachment' to a 'duct, conduit, or right-of-way owned or controlled by a utility.'" *NPRM*, ¶ 1.

<sup>6</sup> It appears that the impact of pole attachment revenues on end-user electric consumer rates is a matter of vast variability, depending on state law, state regulatory policy and the specific circumstances of the electric utility, so that little can be definitively said about that impact. Nonetheless, as a general principle, NASUCA supports compensatory pole attachment rates. The definition of "compensatory" is discussed below.

<sup>7</sup> Alpheus Communications, L.P. and 360Networks (USA), Inc.; AT&T Inc.; Cavalier Telephone LLC; CenturyTel, Inc.; Crown Castle Solutions Corp.; CTIA - The Wireless Association®; DAS Forum; ExteNet Systems, Inc.; FiberTower Corporation; Frontier Communications ("Frontier"); Independent Telephone & Telecommunications Alliance ("ITTA"); Knology, Inc.; MetroPCS Communications, Inc. ("MetroPCS"); National Telecommunications Cooperative Association; NextG Networks, Inc.; Qwest Communications International Inc.; segTEL, Inc.; Sunesys, LLC; T-Mobile USA, Inc.; Time Warner Telecom Inc. et al. ("TWTelecom"); United States Telecom Association ("USTelecom"); Verizon; Windstream Corporation ("Windstream"); Zayo Bandwidth Entities ("Zayo").

<sup>8</sup> Alabama Cable Telecommunications Association, et al.; Charter Communications, Inc. ("Charter"); Comcast Corporation ("Comcast"); MI-Connection Communications System; Mississippi Cable Telecommunications Association; National Cable & Telecommunications Association ("NCTA"); Time Warner Cable Inc. ("TWC"); WOW! Internet Cable and Phone.

<sup>9</sup> See *NPRM*, ¶ 14. Among the other commenters, CURRENT Group, LLC ("CURRENT") is a provider of broadband over powerline and voice over Internet protocol service; the Wireless Communications Association International, Inc. is the trade association of the wireless broadband industry; and Fibertech Networks, LLC and Kentucky Data Link, Inc., which filed joint comments, are respectively, a builder of fiber networks and a telecommunications carrier providing service over fiber networks.

companies whose principal business is electricity supply, although some are also involved in communications.<sup>10</sup> A few comments were filed by other interests.<sup>11</sup>

As is all too typical in these situations, most of the comments are highly parochial. That is, each attaching industry segment seeks to decrease (or at the very least, not increase) its costs. Many of the comments also oppose decreasing the costs of competing industry segments.<sup>12</sup> And the electric utilities to whose poles the attachments are made seek to maximize their revenues (or at least seek to ensure that their revenues do not decrease).<sup>13</sup> All this is understandable, but it does not make for good public policy.

In response to these various positions, NASUCA starts from the simple proposition that a pole attachment is a pole attachment is a pole attachment. That is, unless there is a significant difference shown in the space used or other costs imposed upon the pole, there is no reason why different attachments should be differently priced.<sup>14</sup> That means that the current variety of prices -- depending on the nature of the attaching entity -- makes little sense.

Thus the attachments by incumbent local exchange companies ("ILECs"), competitive local exchange carriers ("CLECs"), wireless carriers, and cable companies, among the primary

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<sup>10</sup> Alabama Power, et al.; Ameren Services Company and Virginia Electric and Power Company ("Ameren"); American Electric Power Service Corporation, et al.; Clark Public Utilities; Coalition of Concerned Utilities ("CCU"); Edison Electric Institute and the Utilities Telecom Council (joint comments); Empire District Electric Company of Joplin, Missouri; Florida Power & Light and Tampa Electric; Idaho Power Company; Oncor Electric Delivery Company; PacifiCorp, Wisconsin Electric Power Company, and Wisconsin Public Service Corporation; Portland General Electric Company; Utilities Telecom Council (separate comments).

<sup>11</sup> Hance Haney, Director & Senior Fellow - Technology & Democracy Project, Discovery Institute. "Reply Comments" were filed on April 1, 2008 by Seth Cooper, Director, Telecommunications & Information Technology Task Force, American Legislative Exchange Council ("ALEC"); because those comments do not really respond to or identify any other party's comments, they are listed here.

<sup>12</sup> See, e.g., Comcast Comments at 24-30; Zayo Comments at 1. But see NCTA Comments at ii (suggesting that the Commission "move the rate for telecommunications attachments closer to the rate produced by the cable formula"); see also id. at 21-22.

<sup>13</sup> See, e.g., Alabama Power, et al. Comments at 15-26.

<sup>14</sup> Likewise, attachments to a "duct, conduit, or right-of-way," while individually priced, should be the same to all that seek to attach.

industry segments, should come at the same price. And narrowband and broadband attachments should also be made at that same price. That would be the arrangement that would be most competitively neutral, leveling the playing field for all the industry participants who need to attach to utility poles.<sup>15</sup>

As the illustrations provided in the early-filed Reply Comments of Fibertower Corporation<sup>16</sup> show (at pages 2 and 3), all attachers must share the limited space on poles. There is no reason why any attachment should be priced differently than another.<sup>17</sup>

Then there is the all-important question of what that price should be based on. In this respect, the poles to which attachments are made are essentially bottleneck facilities owned by public utilities, to which the law has granted other parties access.<sup>18</sup> In similar circumstances -- the provision of unbundled network elements -- the Commission has determined that forward-looking costs are most appropriate to use, because prices would be based on such costs if there were a competitive supply of the facilities.<sup>19</sup> This pricing mechanism was upheld by the United States Supreme Court.<sup>20</sup>

Similarly, the Commission adopted the "cable rate," which is the amount that cable television providers pay for their attachments. This is the lowest of the rates currently being

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<sup>15</sup> See, e.g., Frontier Comments at 1; MetroPCS Comments at 2; Windstream Comments at 2.

<sup>16</sup> Filed April 7, 2008.

<sup>17</sup> Again, unless there is a functional difference in the attachment. That may be the case with pole-top wireless attachments.

<sup>18</sup> 47 U.S.C. § 224. See TWTelecom Comments at 1-2 ("[A]s is often the case, pole owners compete with attachers in downstream retail markets for broadband internet access and other services."); CURRENT Comments at 2 (referring to "the existing system of poles erected in scarce public rights of way and funded with decades of monopoly revenues").

<sup>19</sup> *In the Matter of Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket 96-98, et al., First Report and Order, 11 FCC Red 15499 (1996).

<sup>20</sup> *Verizon Communications v. FCC*, 535 U.S. 467 (2002).



charged for attachments. This rate was upheld against challenges that it was confiscatory.<sup>21</sup>

Thus this is the rate that should be used for all pole attachments, regardless of the exact service provided over the attachment, and regardless of the identity of the attacher.<sup>22</sup> This will “remove regulatory bias from investment decisions regarding deployment of broadband and other services.”<sup>23</sup>

NASUCA thus agrees with the Commission’s tentative conclusion that “all categories of providers should pay the same pole attachment rate for all attachments used for broadband Internet access service,”<sup>24</sup> but urges the Commission to go beyond that tentative conclusion to one that is truly competitively neutral.<sup>25</sup> Equally importantly, the Commission must not increase the rate paid by broadband service providers because this would be contrary to “the nation’s commitment to achieving universal broadband deployment and adoption....”<sup>26</sup> As ITTA states, “Consumers share the brunt of unjust discriminatory tactics that obstruct effective broadband deployment.”<sup>27</sup> A key part of the Commission’s job is to encourage deployment of advanced services<sup>28</sup>; reducing attachment rates for broadband services would help meet that goal.

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<sup>21</sup> *FCC v. Florida Power Corp.*, 480 U.S. 245, 254 (1987); see also *Nat’l Cable & Telecommunications Ass’n v. Gulf Power*, 534 U.S. 327 (2002). See Comcast Comments at 12-19, especially n.41. This effectively rebuts, e.g., CCU Comments at 6-25.

<sup>22</sup> ALEC “Reply” Comments at 4.

<sup>23</sup> *NPRM*, ¶ 12.

<sup>24</sup> *Id.*, ¶ 36; see MetroPCS Comments at 5-6.

<sup>25</sup> ALEC “Reply” Comments at 2-3.

<sup>26</sup> TWC Comments at i. See, e.g., Ameren Comments at 23 (suggesting that the broadband rate could be higher than the current ILEC rate).

<sup>27</sup> ITTA Comments at 7.

<sup>28</sup> 47 U.S.C. § 706.

Respectfully submitted,

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April 22, 2008

I/A  
m4/m5

# EXHIBIT PDK 14

**TVA Restricted Information – Confidential and Business Sensitive**

**PROPOSED BOARD RESOLUTION**  
**(Pole Attachments)**

WHEREAS, TVA regulates the retail rates of the Local Power Companies (LPCs) that distribute TVA power and establishes the terms and conditions under which TVA power is sold to ensure that LPC systems are operated for the benefit of the electric consumers and that rates are kept as low as feasible;

WHEREAS, so that electric system assets and funds are not used in a manner that would result in the subsidization of non-electric activities, an LPC's electric system must be appropriately compensated for the use of electric system assets, including use by cable and telecommunication providers making or maintaining wireline attachments on an LPC's electric system poles;

WHEREAS, a memorandum from the Chief Financial Officer and Executive Vice President, Financial Services (CFO), dated January 22, 2016 (Memorandum), a copy of which is filed with the records of the Board as Exhibit \_\_\_\_\_, recommends that the Board of Directors approve the recommended methodology for regulation of pole attachment rates by adopting the Determination on Regulation of Pole Attachments as described in the Memorandum;

BE IT RESOLVED, that after review of said Memorandum, the Board of Directors finds it to be appropriate and in the interest of TVA to approve the recommended methodology for regulation of pole attachment rates and adopts the Determination on Regulation of Pole Attachments attached to and described in the Memorandum.

RESOLVED further, that the Board hereby authorizes and directs the Chief Executive Officer (CEO), to take all actions necessary or appropriate to implement the Determination on Regulation of Pole Attachments as further described in the Memorandum.

**TVA Restricted Information – Confidential and Business Sensitive**

**January 22, 2016  
Financial Services**

**Board of Directors**

**SUBJECT**

The Board is requested to approve the recommended methodology for regulation of pole attachment rates by adopting the Determination on Regulation of Pole Attachments set out in Attachment A and further described in this memorandum. The Board is further requested to authorize the Chief Executive Officer (CEO) to take all actions necessary or appropriate to implement the Determination on Regulation of Pole Attachments as described.

**BACKGROUND**

TVA sells electric power to local power companies that distribute TVA power (LPCs) pursuant to the Property Clause of the Constitution. Specifically, TVA electric power is property of the United States, and Congress has delegated to TVA the authority to manage that property. Through the TVA Act, Congress has vested broad discretion in the TVA Board of Directors in the exercise of their authority to sell surplus power. Section 10 of the TVA Act authorizes the TVA Board:

... to include in any contract for the sale of power such terms and conditions, including resale rate schedules, and to provide for such rules and regulations as in its judgment may be necessary or desirable for carrying out the purposes of this chapter ...

TVA is the exclusive retail rate regulator for LPCs that distribute TVA power. Further, through the wholesale power contract with each LPC, TVA seeks to ensure that electric systems are operated for the benefit of electric consumers and that rates are kept as low as feasible. It is important to achieving these objectives that TVA ensure that LPC electric systems are appropriately compensated for the use of electric system assets for non-electric purposes.

Over the last few years, TVA has seen an increased regulatory focus on pole attachment fees in the Valley. For example, in 2012 the Kentucky Cable Telecommunications Association (KCTA) petitioned the Kentucky Public Service Commission (KYPSC) to order that the KYPSC has jurisdiction over the rates charged by TVA LPCs. In 2015, the KYPSC determined that it was preempted from regulating the pole attachment rates charged by TVA LPCs. KCTA has appealed the decision by the KYPSC. Similarly in 2014, an opinion was sought from the Tennessee Attorney General regarding the jurisdiction of the State of Tennessee (State) to regulate the pole attachment rates of TVA LPCs. The Tennessee Attorney General concluded that such regulation by the State is not currently "clearly preempted," but stated that if TVA were to assert its regulatory authority over the rates and revenues of TVA LPCs in a way that directly affected pole attachments, then regulation by the State would likely be preempted.

These and other activities in the Valley led to TVA's reevaluation of the need to refine TVA's regulation of pole attachment rates to ensure that electric systems are being appropriately compensated for the use of electric system assets. Failure to do so has a direct impact on the

## **TVA Restricted Information – Confidential and Business Sensitive**

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retail rates charged by LPCs because electric ratepayers will be forced to subsidize the business activities of those entities attaching to the assets of LPCs for non-electric purposes.

### **ALTERNATIVES CONSIDERED**

TVA's Regulatory Assurance staff (Staff) reviewed information related to pole attachment regulation throughout the country and sought input from LPCs and the Tennessee Valley Public Power Association (TVPPA) on the need for further regulation and suggested methods for such regulation. TVPPA proposed a rate formula to TVA, and after consideration of feedback that was received, Staff developed a draft proposal for refinement of TVA's pole attachment regulation. TVA sought feedback from LPCs on the proposal, and based on that feedback TVA developed the following recommendation. TVA has held webinars and other meetings with LPCs to discuss and solicit input on pole attachment regulation. Feedback from individual LPCs and the TVPPA Board of Directors has been generally supportive of TVA's efforts and the actions recommended.

### **RECOMMENDED ACTION AND POTENTIAL IMPACTS**

It is recommended that the Board approve the methodology recommended by Staff for regulation of pole attachment rates that is further described below by adopting the Determination on Regulation of Pole Attachments set out in Attachment A. A summary of Staff's considerations and the feedback received in developing this recommendation is provided as Attachment B.

After studying several methodologies for calculating pole attachment rates, Staff developed a methodology that provides for the fully allocated cost of the pole and is consequently designed to better protect the electric ratepayer. Under this rate methodology, the pole attachment rate is calculated by first establishing the total annual cost of pole ownership, which includes administration, depreciation, maintenance, taxes, and return on investment (ROI). The total cost is then allocated among pole users based on: the actual number of pole users; an equal allocation of support space among the pole users; an equal allocation of safety space among pole users that are attaching for communication purposes; and an allocation of usable space to each pole user.

The methodology provides for equal sharing of support space among all users, including electric. Safety space, however, is allocated equally among users that are attaching for communication purposes. While Staff had initially developed a methodology that allocated safety space to all users, based on input from TVPPA and LPCs, Staff further evaluated the appropriate allocation of safety space. As noted by the National Electrical Safety Code, the safety space on a pole is for the safety of communication workers. Staff concluded that it is proper to allocate safety space to users that attach for communication purposes, and the methodology is reflected in Attachment A.

Certain assumptions have been used for simplification and ease of administration in developing a fully allocated cost methodology for individual LPCs. The calculation assumes: an average

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pole height of 37.5 feet, which is consistent with pole attachment rate formulas used in many jurisdictions; a 15% discount factor to remove items such as cross arms and anchors from pole costs; a uniform ROI equal to 8.5%; and that one foot (or two feet depending on the attacher) of space is occupied by each non-electric attaching party. Space allocation will be determined using the actual number of attaching parties per pole, including the pole owner. TVA may adjust the appropriateness of using assumptions and the assumptions being used from time to time. Any such adjustments will be reported at least annually to the Audit, Risk, and Regulation Committee of the TVA Board.

Some LPCs asked that TVA allow an LPC to apply actual data in place of the other assumptions used in the formula, noting that some LPCs have actual system data that would allow for a more accurate calculation. Staff considers a uniform ROI important to promoting consistency across the Valley, but agrees that it may be appropriate to allow LPCs to use actual system data for average pole height and discount factor. Accordingly, where such data is available and the LPC provides sufficient justification to TVA supporting the use of actual data inputs for both pole height and discount factor assumptions, the LPC may be permitted to use actual data. This is reflected in Attachment A.

Staff completed a preliminary analysis to better understand the potential impacts of the proposed new pole attachment rate methodology. Based on a review of current pole attachment rates charged by LPCs, the mid-point in the Valley is approximately \$18. Applying the recommended methodology may result in a mid-point of approximately \$30. Although most LPCs are expected to see increased rates, some will see decreases from rates that are currently charged. These impacts will likely change once individual LPC pole accounting data is reconciled and validated by both the LPC and TVA.

Several LPCs expressed concern about the variance from current rates that will be produced by the methodology. While Staff considers these changes necessary to ensure proper cost recovery, Staff also recognizes the need to mitigate impacts of new rates. Accordingly, the recommendation reflected in Attachment A provides for a phase-in period. Further, before an LPC may apply the rate derived from the fully allocated cost methodology, Staff must validate data and approve such rate. Following the Board's adoption of the methodology set out in Attachment A, Staff will evaluate the rates calculated by analyzing each LPC's actual data. It is recommended that the CEO be authorized to approve a mechanism, if needed, to further address LPC rates that fall outside certain statistical parameters. This mechanism would be subject to review by the Audit, Risk, and Regulation Committee of the TVA Board prior to implementation.

It is recommended that the Board authorize and direct the CEO to take all actions necessary or appropriate to implement the Determination on Regulation of Pole Attachments. Further, for purposes of clarity, TVA will develop a contract amendment in form and substance acceptable to the Office of the General Counsel to more specifically incorporate TVA's regulatory control over pole attachment rates into the wholesale power contract.



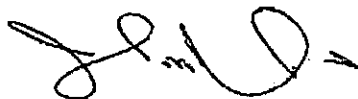
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Staff will continue to work with LPCs and TVPPA to provide for orderly implementation of the pole attachment methodology. All LPCs will be expected to enter into the contract amendment described above as soon as practicable. An LPC may begin using the rate methodology adopted herein as soon as TVA completes an evaluation of and affirms the rate. All LPCs are expected to begin using the new pole attachment rate methodology by January 2017, but no later than January 2018, as described in Attachment A.

**Attachments**

Attachment A: Determination on Regulation of Pole Attachments  
Attachment B: Summary of Considerations and Comments

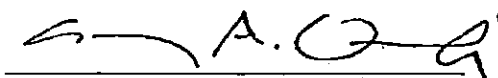



John M. Thomas III  
Executive Vice President and Chief Financial Officer  
Financial Services  
MR 6 D-C

**Attachments**

cc (Attachments)

Dwain K. Lanier, MR 6D-C  
Daniel P. Pratt, MR 6D-C  
Van M. Wardlaw, BR 5D-C  
Laura J. Campbell, MK 1A-MET  
Jeffrey T. McKenzie, WT 7C-K  
EDMS, WT CA-K

  
\_\_\_\_\_  
Sherry A. Quirk                      Date  
\_\_\_\_\_  
William D. Johnson                      Date

Tennessee Valley Authority  
Determination on Regulation of Pole Attachments  
February 2016

Determination By TVA Board

TVA is the exclusive retail rate regulator for local power companies (LPCs) that distribute TVA power. Primarily through the wholesale power contract with each LPC, TVA seeks to ensure that electric systems are operated for the benefit of electric consumers and that electric rates are kept as low as feasible. Ensuring that LPCs are appropriately compensated for the use of electric system assets is important to achieving these goals. Importantly, failure to do so will have a direct impact on retail electric rates because electric ratepayers will be forced to subsidize the business activities of those entities that are utilizing electric system assets. To this end, TVA has evaluated the need to refine its regulation of the rates charged by LPCs where parties such as cable or telecommunication (including broadband) providers make or maintain wireline attachments to electric system assets.

The TVA Board determines it to be appropriate to refine TVA's regulation in this area by identifying the methodology to be used by TVA LPCs in determining pole attachment rates and clarifying TVA's regulatory control over pole attachments within the wholesale power contract between TVA and each LPC.<sup>1</sup>

*Methodology*

In establishing the formula to reflect the fully allocated cost methodology for each individual LPC, certain assumptions have been used to simplify the calculation. The calculation for each attaching party assumes: an average pole height of 37.5 feet; a 15 percent cross arm discount factor; and allocation of either one foot or two feet of space depending on space occupied by the communication attaching party; and a uniform return on investment (ROI) equal to 8.5%.

A more detailed explanation of the components in the pole attachment formula is located in Appendix 1, and an example of the data used in the formula is located in Appendix 2. The formula to be used by all LPCs in establishing pole attachment rates is:

$$\text{Pole Attachment Rate} = (\text{Space Allocation}) \times (\text{Net Cost of Bare Pole}) \times (\text{Carrying Cost})$$

**Space Allocation** - The percentage share of space based upon amount, types, and purposes of space on the pole. Space is allocated based on: the actual number of pole users; an equal allocation of support space among the pole users; an equal allocation of safety space among pole users that are attaching for communication purposes; and an allocation of usable space to each pole user. (See Appendix 3)

<sup>1</sup> Nothing herein is intended to apply to reciprocal or joint use agreements at this time, although TVA expects that appropriate costs will be borne by all participants in these reciprocal or joint use agreements.

- **Net Cost of Bare Pole** – The net pole investment, after applying Discount Factor, divided by the number of poles.
- **Carrying Cost** - Annual operating expenses associated with pole ownership. (Administrative Charge, Maintenance Charge, Depreciation Charge, and Taxes as a percent of net plant plus the Return on Investment)

It is recognized that there may be circumstances in which it is appropriate for LPCs to use actual system data where such data is available. Accordingly, if an LPC provides sufficient justification to TVA supporting the use of actual data inputs for both average pole height and discount factor, TVA may approve the use of such data. Further, TVA may re-evaluate the assumptions used in the formula periodically as well as the appropriateness of using assumptions or actual data in the formula and make adjustments as deemed appropriate. Any such adjustments will be reported at least annually to the Audit, Risk, and Regulation Committee of the TVA Board.

Before an LPC may apply the rate derived from the fully allocated cost methodology, TVA must validate data and approve such rate. Thereafter, on an annual basis, TVA will evaluate and approve the rate to be used. In the event that the methodology produces a rate for an individual LPC that TVA determines to be outside certain statistical parameters, an additional level of review will be required for such rate.<sup>2</sup> Recognizing that LPCs will need a period of time to phase-in any necessary changes to pole attachment rates to mitigate the effect of any significant changes in rates, TVA will work with LPCs to implement the rates derived from the methodology adopted herein using the attached Guideline Adjustment Scale (See Appendix 4) to provide for a transition period to the new rates.

Once the LPC begins applying the rate derived from the fully allocated cost methodology to its arrangements with communication attachers, such rate should be properly adjusted either by using the Handy Whitman Index or by applying the updated TVA approved pole attachment rate. TVA also expects pole attachment counts to be updated on a reasonable cycle in order to ensure accurate revenue collection to cover costs.

#### *Incorporation into Wholesale Power Contract*

For purposes of clarity, each LPC is expected to enter into an agreement with TVA as soon as practicable to more specifically incorporate TVA's regulatory control over pole attachment rates into the wholesale power contract. An LPC may begin using the rate methodology adopted herein as soon as TVA completes an evaluation of and affirms the rate. All LPCs are expected to begin using the new pole attachment rate methodology by January 2017 for all new and renewal contracts. In the event that individual LPCs' circumstances warrant, TVA may extend the time for implementation to no later than January 2018. TVA will develop guidance for LPCs to address the application of new rates where existing contracts contain such provisions as automatic renewal, extension, or re-opener provisions.

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<sup>2</sup> Following the Board's adoption of the methodology, TVA Staff will evaluate the rates calculated by analyzing each LPC's actual data. If it is determined that there is a need to do so, the CEO is authorized to approve a mechanism to further address LPC rates that fall outside certain statistical parameters, subject to review by the Audit, Risk, and Regulation Committee of the TVA Board prior to implementation.

## Attachment A - Appendix 1

### Pole Attachment Formula Components

**Definitions:** For purposes of this Exhibit, the following definitions shall apply, and all financial data have been obtained from the local power companies (LPCs) most recent Annual Report to the Tennessee Valley Authority:

**"Administrative Charge"** shall mean the total of all of the LPCs' administrative and general expenses shown in all of the Sample LPCs' FERC Account 625 (which is a totaling account for FERC Accounts 920, 921, 923-926, 929 & 930) divided by the total of all of the LPCs' electric plant, net of accumulated depreciation.

**"Carrying Costs"** shall mean the sum of the Administrative Charge, the Depreciation Charge, the Maintenance Charge, the Rate of Return, and the Tax-Equivalent Charge, all of which shall be stated as a percentage of net plant.

**"Depreciation Charge"** shall mean the median depreciation rate for the LPCs' multiplied by the quotient of the LPCs' gross FERC Account 364 plant divided by the LPCs' net FERC Account 364 plant.

**"Maintenance Charge"** shall mean the three year average of the LPCs' FERC Account 593 plant expenses divided by the sum of the Sample LPCs' plant shown in FERC Accounts 364, 365 and 369, net of accumulated depreciation.

**"Net Cost of Bare Pole"** shall mean the pole investment as shown in the LPCs' FERC Account 364, net of accumulated depreciation, multiplied by 1 minus the discount factor divided by the total number of LPC utility poles included in FERC Account 364.

**"Discount Factor"** represents the percentage of distribution pole plant items (only) in FERC Account 364 excluding cross arms, anchors, etc.

**"Return on Investment"** shall mean eight and a half percent (8.5%).

**"Space Allocation"** is based upon a standard average 37.5 foot pole and the actual number of parties per pole, including the pole owner.

**"Tax and Tax-Equivalent Charges"** shall mean the quotient of the LPCs' tax and/or tax-equivalent payments shown in FERC Account 408.1 divided by all of the LPCs' electric plant, net of accumulated depreciation.

## Attachment A - Appendix 2

### Pole Attachment Formula Example

Net Cost of Bare Pole	\$	278.93 (a)
Carrying Charge		26.61% (b)
Annual Cost of Ownership ( a*b=X)	\$	74.22 X
Space Allocation (% of Total Pole)		
Fully Allocated Cost Formula $(B+(1/(A-1)*C)+(1/A)*E)/(D+E)$		28.44% Y
Maximum Rate per Pole		
Fully Allocated Cost Formula ( X*Y=Z)	\$	21.11 Z

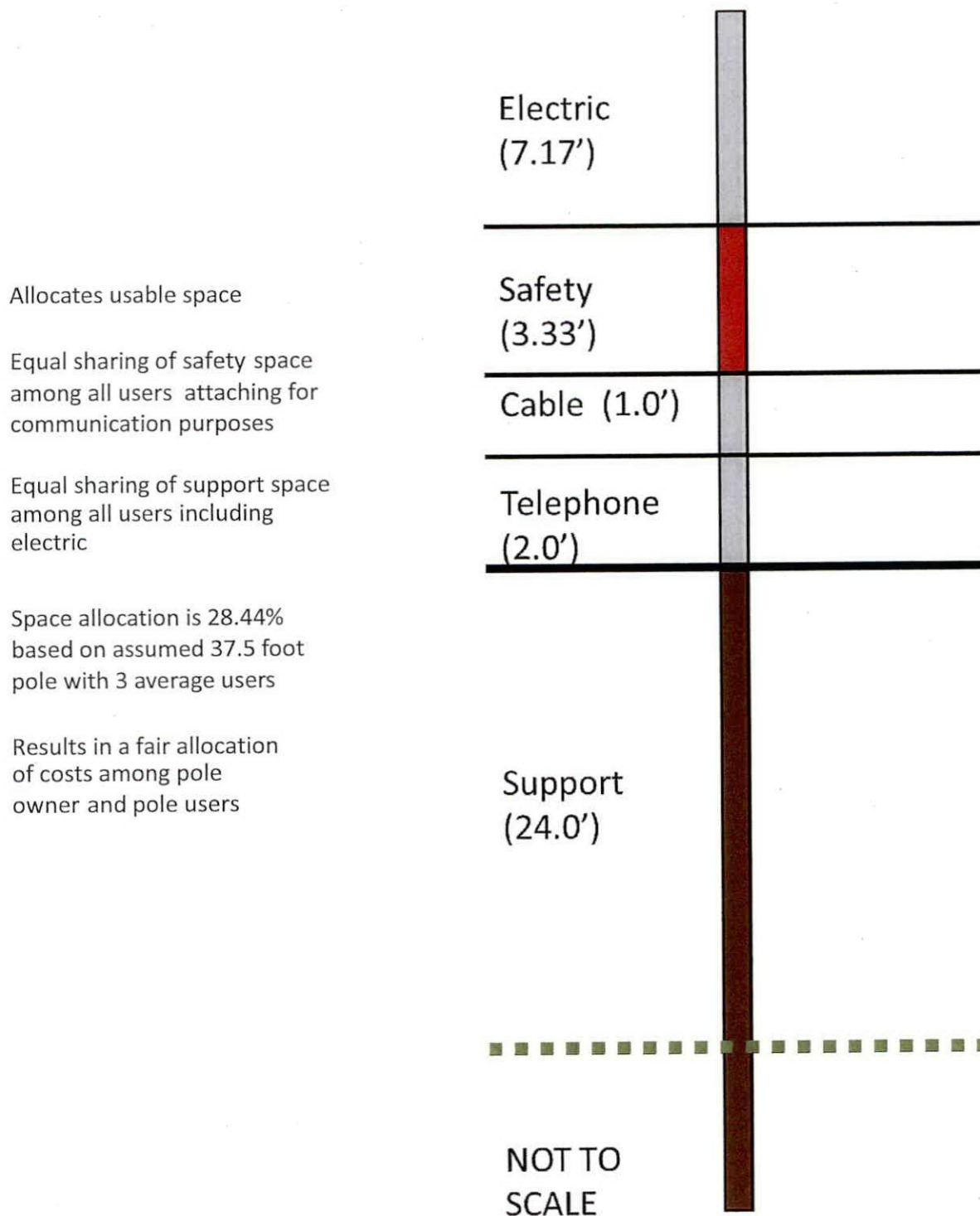
<b>Space Allocation:</b> Assumptions include 3 entities attaching to 37.5' pole.		
(A) Number of Attaching Parties	3	
(B) Space Occupied by Attaching Party	1	feet
(C) Safety Space	3.33	feet
(D) Total Usable Space	13.5	feet
(E) Total Support Space (6' Ground + 18' Clearance)	24	feet

<b>Net Cost of a Bare Pole:</b>		
(1) Gross Pole Investment ( FERC A/C 364)	\$	7,545,190.30
(2) Depreciation Reserve ( FERC A/C 108.364)	\$	1,972,753.62
(3) Gross Plant Investment ( FERC A/C 364, 365, & 369)	\$	14,998,392.35
(4) Net Investment (Poles) $(L(1)-L(2))$	\$	5,572,436.68
(5) Net Investment (Bare Pole) $(L(4) \times .85)$	\$	4,736,571.18
(6) Number of Poles		16,981
(7) Net Cost of a Bare Pole $(L(5)/L(6))$	\$	278.93 (a)

<b>Carrying Charge:</b>		
(1) Administrative Charge	3.26%	
(2) Maintenance Charge	8.56%	
(3) Depreciation Charge	4.06%	
(4) Taxes	2.23%	
(5) Return on Investment	8.50%	
(6) Total Carrying Charge Rate $(L(1)+L(2)+L(3)+L(4)+L(5))$		26.61% (b)

<b>Administrative Charge</b>		
(1) A&G Expense (TVA AR Rpt Item 625 & a/c 935 -page 6)	\$	1,321,181.13
(2) Net Plant Investment ( TVA AR Rpt Item 6-Page 1)	\$	40,478,879.32
(3) Administrative Charge $(L(1)/L(2))$		3.26%
<b>Maintenance Charge</b>		
(1) Maintenance Exp.(Three yr avg. -TVA AR a/c 593-Page 6)	\$	837,521.00
(2) Net Investment (Pole Accounts 364, 365 & 369)	\$	9,779,762.19
(3) Maintenance Charge $(L(1)/L(2))$		8.56%
<b>Depreciation Charge</b>		
(1) Depreciation Rate ( TVA AR Rpt -page 11)		3.00%
(2) Gross Pole Investment (Account 364)	\$	7,545,190.30
(3) Net Pole Investment (Account 364)	\$	5,572,436.68
(4) Depreciation Charge $(L(1) \times (L(2)/L(3)))$		4.06%
<b>Taxes</b>		
(1) Total Current and Deferred Taxes ( TVA AR a/c 408 Property -pg 29)	\$	902,919.19
(2) Net Plant Investment	\$	40,478,879.32
(3) Taxes $(L(1)/L(2))$		2.23%
<b>Return on Investment</b>		
Authorized by Regulatory Authority		8.50%

Attachment A - Appendix 3  
Space Allocation Illustration:  
The Fully Allocated Cost Method



## Attachment A - Appendix 4

### Guideline Adjustment Scale:

Dollar Variance	Transition Period *	Monthly - Adjustment (+/-)	
		Low	High
\$ 0 - \$ 5	Immediate action	\$ -	\$ 0.42
\$ 6 - \$10	No more than 2 years	\$ 0.21	\$ 0.42
\$11 - \$20	No more than 3 years	\$ 0.31	\$ 0.56
\$21 - \$30	No more than 4 years	\$ 0.44	\$ 0.63
\$31 or greater	No more than 5 years	\$ 0.52	\$ > 0.52

\* Transition period begins upon effective date of new or updated contract with attaching party.



## TVA RESTRICTED AND PRE-DECISIONAL

## Attachment B

### Summary of Consideration and Comments

Related to Recommendation to TVA Board February 2016

To understand the proposal being made to the TVA Board, the following summary is being provided to address: 1) pole attachment rate methodologies, 2) the scope of pole attachment regulation, and 3) comments TVA received regarding such regulation.

#### I. METHODOLOGIES

TVA's Regulatory Assurance staff (Regulatory Staff) reviewed several methodologies by which other regulatory bodies set pole attachment rates. After such review, Regulatory Staff focused on four methodologies. Generally, all formulas for calculating pole attachment rates are the product of space factor and annual pole cost. Space factor, which establishes the percentage of annual pole costs that each user of the pole will bear, is the primary driver in the differences between formulas.

##### *A. The Federal Communications Commission Method (FCC):*

The FCC has established formulas for determining pole attachment rates for cable and telecommunication attachments for investor-owned utilities. The FCC uses separate formulas for cable and telecommunication service attachments. The FCC rate for cable service attachments results in the lowest rate, requiring the attacher to typically only pay a rate that amounts to recovery of approximately 7.4% of the annual pole cost. The traditional telecommunication formula produces a rate that is typically 16.9% of the annual pole cost in non-urban areas and 11.2% in urban areas. In order to further the FCC's goal of "promoting consistent, cross-industry attachment rates that encourage deployment and adoption of broadband Internet access services,"<sup>1</sup> the FCC, in recent years, has taken steps to "bring cable and telecom rates for pole attachments into parity at the cable-rate level" by applying certain allocators that serve to reduce recovery of capital and operating costs. The FCC does not have jurisdiction to regulate the pole attachment rates of municipal and cooperative systems.

After careful review, Regulatory Staff recognized that because the FCC formulas are designed to further the policy goal of encouraging broadband investment, particularly in rural areas, they do not appropriately compensate the electric utility for the attachment. Unlike the FCC, however, TVA is charged with keeping electric rates as low as feasible, and ensuring that electric ratepayers do not subsidize other business activities is important in achieving this objective. The manner in which the FCC methods determine space allocation on poles requires pole owners to absorb most of the capital and operating costs of a pole on the assumption that pole owners do not take the interests of attaching entities into account in making their capital

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<sup>1</sup> *Implementation of Section 224 of the Act; A National Broadband Plan for Our Future*, WC Docket No. 07-245, GN Docket No. 09-51, Order on Reconsideration, (released Nov. 24, 2015)

[https://apps.fcc.gov/edocs\\_public/attachmatch/FCC-15-151A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/FCC-15-151A1.pdf)

investment decisions. This is particularly true in the cable formula, which only accounts for the space occupied on the usable space of a pole. Regulatory Staff disagrees with this assumption.

TVA's recommended methodology differs from the FCC telecommunication formula in determining the space factor in several respects. Safety space, which is an amount of unused space that is required on utility poles to safely separate electric facilities from communication facilities, is assigned to the electric pole owner even though the safety space is solely for the safety of communication workers. Regarding support space, the FCC telecommunication method assigns 1/3 of the support space to the pole owner, which is the electric utility, and then the remaining 2/3 of the support space is equally shared among all attaching entities, which also includes the electric utility. The recommended TVA methodology allocates all of the safety space to the communications attachers and equally allocates support space among all attachers, including electric.

*B. The American Public Power Association Model (APPA):*

The APPA has created a model licensing agreement that covers attachments to municipal utility poles, ducts, and conduits owned by municipal electric utilities and a shared-cost formula for calculating rates. The APPA model is designed to provide the utility with full recovery of its expenses and fair compensation for use of its poles, and Regulatory Staff was able to utilize many components from the APPA model. The primary difference between the TVA proposed methodology and the APPA methodology is in allocation of safety space.

In determining the space factor, the APPA model allocates safety space equally among all pole users, including electric. Like the APPA model, TVA plans on employing assumptions for average pole height and discount factor, but with flexibility to allow the use of actual data when it is available and otherwise justified.

*C. "Analysis of Pole Attachment Rate Issues in Tennessee," prepared by Tennessee Advisory Commission on Intergovernmental Relations (TACIR<sup>2</sup>):*

In 2007, the TACIR commissioned a study of proposed legislation in Tennessee that addressed the issue of pole attachments by cable and telecommunication providers to the poles owned by cooperative and municipally owned utilities. The TACIR report collected information about methods used by electric providers in Tennessee, and it provided a comparison of the FCC cable formula, the FCC telecommunication formula, and a "full-cost" methodology utilized by some electric utilities. The full cost allocation method reviewed in the TACIR report most closely met the objectives of TVA's pole attachment regulation. For a three-party pole, this method generally results in a space factor of 28.4%, which allocates safety space to non-electric users and provides for equal sharing of support space. This is consistent with the final TVA recommendation.

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<sup>2</sup> Available at [https://www.tn.gov/assets/entities/tacir/attachments/pole\\_attachment\\_rate\\_issues.pdf](https://www.tn.gov/assets/entities/tacir/attachments/pole_attachment_rate_issues.pdf)

*D. Tennessee Valley Public Power Association (TVPPA):*

In response to a request from TVA, TVPPA proposed a methodology for TVA to consider in its regulation of pole attachment rates. (See Appendix 1) Like the formula reviewed in the TACIR report, TVPPA proposed a methodology that provides for an equal allocation of support space, an equal allocation of safety space to all communication users, and an allocation of usable space to each pole user. Because Regulatory Staff concluded that the methodology proposed by TVPPA best reflects full cost allocation, the final recommendation is largely consistent with the TVPPA proposal. It does, however, differ in a few respects. Notably, the Regulatory Staff recommendation includes an 8.5% ROI instead of 10%, and the TVA methodology uses the actual number of pole attachers instead of an assumption of three per pole.

**II. SCOPE**

The scope of pole attachment regulation by many regulatory bodies is broader than the regulation that TVA is seeking to refine with this current effort. Regulatory Staff considered whether such regulation should include joint use agreements or other similar reciprocal agreements with telephone companies that also own poles within LPCs' respective service areas. Because joint use and reciprocal arrangements provide benefits (from reciprocal use of poles) that are not present in non-reciprocal arrangements, the rate methodology under consideration was not determined at this time to be well-suited to address joint use and other reciprocal arrangements.

Further, Regulatory Staff noted that many regulatory bodies not only regulate the rate for pole attachments but also the terms and conditions for pole attachment, such as dismantling fees and penalties. Regulatory Staff contemplated a similar regulatory scope but determined that regulating beyond the rate is neither feasible nor appropriate at this time.

**III. COMMENTS***A. Solicitation of Input*

On August 12, 2015, TVA sent a letter to LPCs and the Tennessee Valley Public Power Association (TVPPA) indicating that TVA was evaluating further refinement of TVA's regulation of pole attachment rates. TVA invited recommendations on a pole attachment methodology. (See Appendix 2) TVPPA recommended the methodology described above, and TVA reviewed the TVPPA recommendation along with research conducted by Regulatory Staff. On November 10, 2015, TVA provided to all LPCs for input a draft recommendation addressing refinement of TVA's regulation of pole attachment rates and setting out a proposed methodology. (See Appendix 3)

TVA conducted a series of webinars and meetings with LPCs and received feedback from many of them and TVPPA. Largely, that feedback fell into three broad categories: methodology; changes in rates/implementation; and scope of regulation. Regulatory Staff considered the feedback in developing the final recommendation made to the TVA Board. Below is a summary of the Regulatory Staff's consideration of the feedback received.

*B. Summary of Feedback**1. Methodology*

TVA's initial draft recommendation provided for the safety space on an electric pole to be allocated equally among all attachers, including electric. TVA specifically asked for input on this issue, and many LPCs expressed concern about the appropriateness of allocating any of this space to electric. While some LPCs supported the equal allocation of safety space, almost all that commented on this issue noted that safety space is only required for the protection of communication workers. The National Electrical Safety Code recognizes this space as being a "Communication Worker Safety Zone," and many LPCs urged TVA to recognize this by allocating all of the safety space to non-electric attachers. Regulatory Staff agrees that safety space should be allocated to the communications attachers and this is reflected in the ultimate recommendation to the TVA Board.

For simplification and ease of administration, the methodology developed by Regulatory Staff for calculation of pole attachment rates includes certain assumptions. Regulatory Staff attempted to balance rate calculations for each LPC with concerns about cost and other resource constraints associated with compiling and validating individual data components that may not be easily available. The initial draft that was provided to LPCs for input included assumptions for pole height, discount factor, return on investment, space occupied per attacher, and number of attachers per pole. Feedback on each of these is provided below:

- **Pole Height** – Regulatory Staff's initial draft recommendation assumed a pole height of 37.5 feet, which is consistent with the assumption included in pole attachment rate formulas used in many jurisdictions. Several LPCs noted that pole heights vary significantly and questioned whether actual pole height data should be used. Some expressed concerns about using such assumptions since some LPCs operate and maintain an electric system with an average pole height greater than 37.5 feet and some LPCs may be lower. LPCs also indicated that utilizing each LPC's actual average pole height will produce a more accurate rate for that utility. While Regulatory Staff considers pole height to be an area where it is appropriate to utilize an assumption, the final recommendation to the TVA Board allows for LPCs to use actual data for both pole height and discount factor when requested by the LPC and verified by TVA as appropriate.
- **Discount Factor** – In order to determine the cost of a pole, the net pole cost as reflected in the LPC's financial records is reduced by an amount determined to represent costs associated with items such as cross arms and anchors because these items are not used by communication attachers. Consistent with some of the methodologies reviewed, Regulatory Staff considers 15% of the net pole costs to be a fair representation of these costs. Some LPCs suggested that it would be more appropriate to permit LPCs to use their actual system data for this input into the formula. As explained above, this is reflected in the final recommendation.
- **Return on Investment** – Staff has recommended that the methodology include an 8.5% return on investment (ROI). Several LPCs questioned the use of a standard ROI instead

of allowing for the use of individual LPC calculations of the cost of capital. Some suggested that 8.5% is too high, and others thought it is too low. Rather than using an individualized ROI that is calculated for each LPC system, Regulatory Staff considers a uniform ROI to be appropriate in order to promote consistency across the Valley. The assumption included in the methodology was calculated by TVA's Treasury Staff utilizing 2014 LPC financial data. TVA provided additional information to LPCs to describe the manner in which TVA concluded that 8.5% represents a reasonable weighted average cost of capital for LPCs as reflected in the final Regulatory Staff recommendation. (See Appendix 4)

- Space Occupied per Attacher – The initial draft recommendation included an assumption that one foot of space is occupied by each attaching party. Some LPCs noted that the amount of space used by an attacher can vary depending upon the type of attachment and questioned whether different assumptions should be used. To address this, Regulatory Staff modified the formula to calculate a rate for either one foot of space or two feet of space. This is reflected in the final recommendation to the TVA Board.
- Number of Attachers per Pole – Regulatory Staff's initial draft recommendation utilized an assumption of three attachers per pole in determining space allocation. Regulatory Staff considered this to be a reasonable average to use across the Valley, and this assumption is consistent with some of the other methodologies that were reviewed. Several LPCs provided information about the actual number of attachers on their system and questioned the use of an assumption instead of actual data. This feedback increased TVA's level of confidence that LPCs have the data available to determine the actual number of attachers. In the final recommendation to the TVA Board, space allocation will be determined using the actual number of attachers on the poles.

Tax-equivalent charges directly paid by LPCs are included in determining the carrying costs component of the proposed formula. Some LPCs suggested that 5% of the LPC power costs should also be added to their annual pole costs because LPC wholesale rates include an amount that represents payments paid by TVA to state and local governments in-lieu-of taxes (PILOT). Regulatory Staff does not consider it appropriate to include these power costs because they do not directly apply to the cost of the pole asset.

## 2. Change in Rates and Implementation Issues

As LPCs evaluated the rates for their own systems using the methodology being proposed to the TVA Board, many raised concerns about both the variance from current rates and the appropriate way to implement the rates. Several LPCs noted that their own rates are likely to increase based on a preliminary review of the rate methodology. They expressed concern about the reaction of current attachers to these increases and suggested that this could result in legal challenges and collection problems. Some LPCs suggested that it may be appropriate to cap the rates produced by the methodology or to otherwise provide for some flexibility in determining the appropriate rate for an LPC. For example, one LPC questioned whether TVA would allow an LPC to charge the Valley-wide average pole rate or a rate that is within a certain band of the Valley-wide average pole rate.

While Regulatory Staff considers it necessary for the TVA Board to adopt a methodology that ensures appropriate cost recovery for the use of electric system assets, Regulatory Staff recognizes the need to mitigate some of the impacts associated with the new rates. Accordingly, where rates are determined to be outside certain statistical parameters an additional level of review will be required. Following the Board's adoption of a methodology, Regulatory Staff will evaluate and analyze the rates calculated by applying each LPC's actual data to the methodology. The recommendation being made to the TVA Board provides for TVA's Chief Executive Officer (CEO) to approve a mechanism to further address LPC pole attachment rates that fall outside certain statistical parameters.

Regulatory Staff is also recommending a phase-in approach to implementing new pole attachment rates. This is designed to provide a period of time for the LPC and attaching parties to adjust to changes in rates calculated by the new methodology. TVA received many questions related to implementation and TVA's expectations related to new and existing contracts. Regulatory Staff believes that the nature of the issues raised is such that they can be resolved through continued discussion between TVA and LPCs.

### **3. Scope of Recommendation**

Several LPCs suggested that TVA's regulatory focus should extend beyond the rates charged for attachments. For example, some suggested that TVA should authorize punitive actions to be taken for certain actions, such as failure to pay in a timely manner and failure to remove attachments. Some LPCs noted that certain actions by attaching parties can create safety and other concerns for the electric department. Some also suggested that TVA should develop regulations or guidance to address things such as non-payment, late fees, back-billing for unreported attachments, contractual issues, and enforcement of new rates.

Regulatory Staff considers these issues to be outside the scope of the present effort and is not making any recommendations to the TVA Board at this time. Regulatory Staff will continue to work with LPCs on issues related to pole attachments and evaluate the appropriateness of further regulation.





Tennessee Valley  
Public Power Association, Inc.

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##### General Counsel

CARLOS C. SMITH

October 8, 2015

Ms. Jennifer Brogdon  
TVA Regulatory Assurance  
1101 Market Street MR 6D  
Chattanooga TN 37402

Dear Ms. Brogdon:

As you know, the Board of Directors of the Tennessee Valley Public Power Association (TVPPA) and various TVPPA committees have been evaluating ways in which TVA could more directly regulate pole attachment rates for TVPPA member systems. While pole attachment rates are already within TVA's regulatory oversight, this approach would provide a more specific framework for evaluating and regulating these rates.

The TVPPA Board of Directors discussed this matter at its September 14, 2015 meeting. At that meeting, the Board of Directors unanimously approved some pole cost calculation and cost allocation principles for recommendation to TVA based upon the work of the TVPPA Joint Use Committee and the TVPPA Regulatory Committee. TVPPA has developed a proposed Rate Formula based upon this methodology.

We have attached an overview of the proposed Rate Formula as Exhibit A. Exhibit B contains more detailed information on the Rate Formula. TVPPA submits that the Rate Formula provides a rate methodology that appropriately shares costs of pole ownership between local power companies and the parties that utilize their poles. The Rate Formula calculates the total annual cost of pole ownership, including administration, depreciation, maintenance, taxes and payments in lieu of taxes, cost of capital and a rate of return, and then allocates that total cost among pole users based on an assumed system average number of pole users. The allocation methodology provides for an equal allocation of support space on the pole among all pole users, an equal allocation of safety space on the pole among pole users other than the electric system, and an allocation of usable space to each pole user.

As you will note, TVPPA suggests that this formula should be limited to regulation of rates included in license agreements between local power companies and third parties making or maintaining wireline attachments in the communications space on the local power companies' poles. Today, local power companies typically operate under long-standing joint use arrangements or other similar reciprocal agreements with telephone companies that also own poles within the local power companies' respective service areas. This regulatory policy is not intended to apply to such current or future joint use arrangements.



Ms. Jennifer Brogdon

October 2, 2015

Page 2

The TVPPA Board recommends that TVA adopt a transition period that will give local power companies sufficient time to compile, review and, if necessary, reconcile their pole plant accounting records in order to capture the appropriate costs of ownership. This transition period should also allow local power companies sufficient time to phase in any necessary changes to their pole attachment rates to mitigate any significant changes in rates – positive or negative – on TVPPA member systems and the parties that utilize their poles. To provide greater predictability and stability for this rate structure, TVPPA further submits that TVA should allow local power companies to use plant account data from multiple years where necessary to normalize a local power company's plant costs; and TVPPA requests that TVA allow local power companies to utilize a generally accepted index, such as the Handy-Whitman Index, to adjust costs on intervals not to exceed five (5) years.

The transition plan will play a critical role in ensuring the success of this more detailed regulatory structure, and TVPPA would welcome the opportunity to discuss transition issues in greater detail with TVA. The TVPPA Joint Use and Regulatory Committees have a wealth of knowledge on this topic and will be valuable resources to TVA in this process.

We appreciate the opportunity to work with you and others at TVA on this issue. The TVPPA Board, its Committees, its staff and I will be available at your convenience to discuss next steps in this process.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jack W. Simmons", with a large, stylized flourish extending from the end of the signature.

Jack W. Simmons  
President & CEO

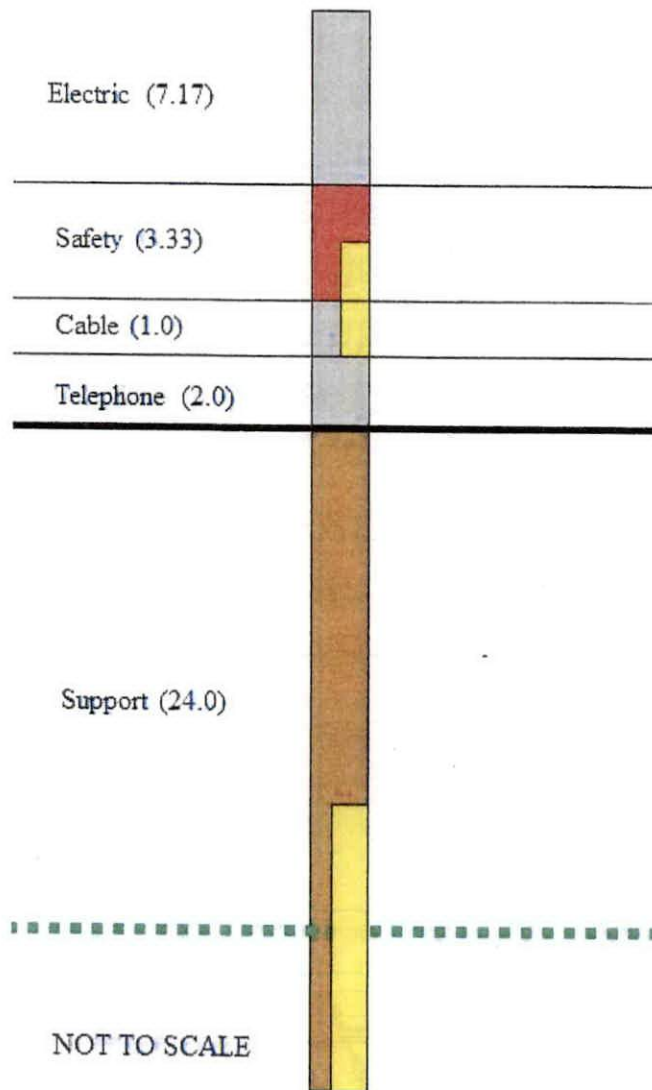
# Pole Attachment Rate Formula

$$\text{Attachment Rate} = \text{Pole Cost} * \text{Carrying Costs} * \text{Space Allocation}$$

- Pole cost = Net cost of a bare pole (the average investment per pole net of depreciation)
- Carrying costs = Annual operating expenses associated with pole ownership
  - Administrative
  - Maintenance
  - Depreciation
  - Taxes and in lieu of tax payments
  - Cost of capital and rate of return
- Space allocation = share of costs based upon amount of space on a pole

EXHIBIT A

## Space Allocation: The Fully Allocated Cost Method



- The fully allocated cost method allocates:

- Usable Space

- Equal sharing of Safety Space with communications attachers

- Equal sharing of Support Space with all users (including local power company)

- Space Allocation: 28.44%, based upon an assumed 37.5' pole with 3 average users

- This allocation method results in a more equal allocation of costs among the pole owner and pole users

**EXHIBIT B**

Rate Formula

1. **Attachment Rate Calculation.** A local power company (or "LPC") will use the following formula for calculating a cost-based pole attachment rate:

$$\text{Attachment Rate} = \text{Pole Cost} * \text{Space Allocation} * \text{Carrying Costs}$$

2. **Definitions.** For purposes of this Exhibit, the following definitions shall apply, and an LPC shall calculate the Pole attachment rate financial data drawn from the LPC's Annual Report filings with TVA:

a. "Administrative Charge" shall mean the total of all of the LPC's administrative and general expenses associated with ownership of its overhead plant, including without limitation those expenses shown in the LPC's FERC Account 625 (which is a totaling account for FERC Accounts 920, 921, 923-926, 929 & 930) divided by the total of all of the LPC's electric plant, net of accumulated depreciation.

b. "Carrying Costs" shall mean the sum of the Administrative Charge, the Depreciation Charge, the Maintenance Charge, the Rate of Return, and the Tax-Equivalent Charge, all of which shall be stated as a percentage of net plant.

c. "Depreciation Charge" shall mean the depreciation rate for the LPC's pole plant multiplied by the quotient of the LPC's gross FERC Account 364 plant divided by the LPC's net FERC Account 364 plant.

d. "Maintenance Charge" shall mean the total of all of the LPC's maintenance expenses associated with ownership of its overhead plant, including without limitation the LPC's FERC Account 593 plant expenses divided by the sum of the LPC's plant shown in FERC Accounts 364, 365 and 369, net of accumulated depreciation.

e. "Pole Cost" shall mean eighty-five percent (85%) of the pole investment as shown in the LPC's FERC Account 364, net of accumulated depreciation, divided by the total number of LPC utility poles included in FERC Account 364.

f. "Rate of Return" shall mean ten percent (10%).

g. "Space Allocation" shall mean twenty-eight and 44/100 percent (28.44%), which is based upon an average 37.5 foot pole and an average of three pole users per pole, including the pole owner.

h. "Tax and Tax-Equivalent Charges" shall mean the total of all of the LPC's tax and tax equivalent charges associated with ownership of its overhead plant, including without limitation the quotient of the Sample LPCs' tax and/or tax-equivalent payments shown in FERC Account 408.1 divided by all of the Sample LPCs' electric plant, net of accumulated depreciation.

## Attachment B - Appendix 1

3. **Applicability.** The Rate Formula is limited to regulation of rates included in license agreements between LPCs and third parties making or maintaining wireline attachments in the communications space on the local power companies' poles. As of the date of adoption of this policy, LPCs typically operate under long-standing joint use arrangements or other similar reciprocal agreements with telephone companies that also own poles within the local power companies' respective service areas. Those agreements provide for a different allocation and sharing of operating and financial responsibilities between the parties. While a LPC is not precluded from using this rate policy for joint use agreements, nothing in this rate policy is intended to apply to such current or future joint use arrangement.



Attachment B - Appendix 2



Tennessee Valley Authority, 1101 Market Street, MR 6D-C, Chattanooga, Tennessee 37402-2801

August 12, 2015

Dear :

At the February 5, 2014, TVPPA Regulatory Committee meeting, TVA President and CEO Bill Johnson stated that in light of increased regional regulatory focus on pole attachment fees, TVA will evaluate whether further refinement of its regulation of Local Power Company (LPC) pole attachment rates is needed. TVA, pursuant to the TVA Act, has the exclusive authority to regulate retail rates and service practices of LPCs, including establishing terms and conditions under which TVA power is resold. TVA has a duty to ensure that electrical power is supplied at the lowest feasible cost, and this requires that the electric system is appropriately compensated for the use of electric system assets. To this end, in accordance with Mr. Johnson's directive, TVA is further analyzing the pole attachment charges throughout the Valley to determine whether current practices ensure appropriate recovery so that ratepayers are charged costs properly assigned to their electric system.

TVA appreciates the efforts by TVPPA's Joint Use Committee, on behalf of the TVPPA membership, in studying pole attachment rate practices at TVA's request. We look forward to the Committee making a recommendation to TVA on a fair and consistent pole attachment cost recovery methodology. Given that any regulatory policy changes in pole attachment regulation will impact many, if not all, LPCs, TVA encourages TVPPA's and LPCs' engagement and input on this matter. If, as a result of these efforts, TVA staff concludes that refinements to TVA's pole attachment regulation are necessary or desirable, we expect to make such a proposal to the TVA Board at its February 2016 meeting. In order to provide adequate time for review and consideration of feedback from all 155 LPCs, the following preliminary timeline has been established:

- August to September 2015 - TVA continues to coordinate with TVPPA Joint Use Committee and solicits input from LPCs. Send all feedback to Barry Barnett at [jbbarnett@tva.gov](mailto:jbbarnett@tva.gov).
- September 2015 - Date by which TVA expects a recommendation from LPCs and TVPPA
- September 2015 - TVA completes draft recommendation and provides to TVPPA and LPCs
- October 2015 to November 2015 - TVA solicits feedback from LPCs and TVPPA on TVA's draft recommendation
- January 2016 - TVA finalizes recommendation for TVA Board action Sincerely,

A handwritten signature in cursive script that reads "Jennifer Brogdon".

Jennifer Brogdon  
Director  
Regulatory Assurance

Attachment B - Appendix 3



Tennessee Valley Authority, 1101 Market Street, MR 6D-C, Chattanooga, Tennessee 37402-2801

November 10, 2015

Dear TVA Local Power Company:

TVA has been reviewing its regulation of pole attachment rates. We appreciate the local power companies (LPCs) who responded to our August 12 request and provided input to TVA on an appropriate and consistent cost recovery methodology. TVA also appreciates the collaborative efforts of TVPPA and the Joint Use Committee who, on behalf of its members, studied pole attachment rate practices and made a proposal to TVA.

TVA has incorporated feedback from LPCs and TVPPA in developing the enclosed pole attachment rate methodology. Information is provided on the scope, methodology, and implementation plan.

So that you can fully consider TVA's recommendation, I am enclosing a rate calculation template to assist you in calculating the pole attachment rate that would be derived from the formula proposed in TVA staff's recommendation if it is ultimately adopted by the TVA Board. An excel spreadsheet version will be e-mailed to you for your use. If you need assistance with the template, please contact Laura McDade at 423-751-2474 or [ldmcdade@tva.gov](mailto:ldmcdade@tva.gov).

TVA plans to present a final recommendation to the TVA Board at the February 2016 meeting. As you will see in the enclosed recommendation, TVA is specifically seeking additional input on the allocation of safety space to pole users. Please submit your input on TVA's Staff Recommendation to Barry Barnett at 865-632-2107 or [jbarnett@tva.gov](mailto:jbarnett@tva.gov). To allow adequate time for TVA's review and consideration, please provide your feedback on this recommendation by November 30. Please note that a webinar is scheduled Thursday, November 19 from 2:00 p.m. until 4:00 p.m. (CT) to provide an opportunity for more discussion.

In order to better analyze pole attachment rates, TVA would appreciate current pole attachment rate information from you. Your assigned TVA Distributor Assurance field accountant will contact your accountant for information in the coming days. If you have any questions, please contact me at 423-751-8397 or a member of the Regulatory Assurance staff.

Sincerely,

(Original Signed By):

Jennifer Brogdon  
Director  
Regulatory Assurance

Enclosures



Tennessee Valley Authority

TVA Staff Recommendation for Refining Pole Attachment Rate Regulation

Provided For Input

November 10, 2015

Scope

Tennessee Valley Authority (TVA) is the exclusive retail rate regulator for local power companies (LPCs) that distribute TVA power. One primary objective of TVA is to ensure that power is sold at rates as low as feasible, and accordingly, LPC electric systems must be appropriately compensated for the use of electric system assets for non-electric purposes. As part of approving each LPC's electric rates, TVA evaluates each LPC's revenue requirements which, among other things, include revenue from pole attachment fees.

TVA staff's recommendation for refining its pole attachment regulation (Staff Recommendation) is being provided for TVPPA's and LPC's input, and a final recommendation ultimately will be proposed to the TVA Board. The scope of the Staff Recommendation is limited to regulation of rates included in agreements between LPCs and third parties making or maintaining wireline attachments, such as cable or telecommunication (including broadband) providers. This recommendation is not intended to apply to reciprocal or joint use agreements at this time although TVA also expects appropriate costs to be borne by all participants in these reciprocal or joint use agreements.

Methodology

TVA staff reviewed information related to pole attachment regulation throughout the country. Staff has observed that most methods for calculating pole attachment rates are based on the annual cost (or carrying charge) of a pole and the proportion of the attaching space on the pole occupied by an attachment. TVA does not feel that these methods recover the full costs associated with the pole attachment, so the Staff Recommendation provides for a pole attachment rate methodology that recovers the full cost of the pole in order to ensure that electric system ratepayers are not incurring costs that should be borne by attachers.

Under this proposed rate methodology, the pole attachment rate is calculated by first establishing the total annual cost of pole ownership, which includes administration, depreciation, maintenance, taxes, and rate of return. The total cost is then allocated among pole users based on: an assumed system average number of pole users; an equal allocation of support space among the pole users; an equal allocation of safety space among pole users; and an allocation of usable space to each pole user. As to the allocation of safety space among all pole users, TVA is specifically seeking additional input.

## Attachment B - Appendix 3

It has been suggested to TVA that allocation of safety space to only the third-party attachers would be more appropriate because the safety space is for the benefit of those third parties. Accordingly, while the attached methodology reflects an equal allocation of this space, TVA staff will further evaluate this issue along with any additional feedback that is received.

TVA recognizes that LPCs will need a period of time to phase-in any necessary changes to pole attachment rates to mitigate any significant changes in rates that will impact the LPCs and the attachers. Accordingly, TVA will work with LPCs to implement the rates derived from this rate methodology using the attached Guideline Adjustment Scale (Appendix 1) to provide for a transition period to the new rates. The Guideline Adjustment Scale provides for a period of time to adjust rates based on the difference between current and new rates.

In establishing the formula to reflect the fully allocated cost methodology for each individual LPC, TVA has utilized certain assumptions to simplify the calculation. For example, the calculation assumes an average of three attaching parties per pole, an average pole height of 37.5 feet, a 15 percent cross arm discount factor, and a uniform return on investment equal to 8.5%. A uniform return on investment percent used by all LPCs in the calculation of their pole cost rate will help promote consistency across the Valley. TVA will re-evaluate this percentage periodically for the pole attachment formula. A more detailed explanation of the components in the pole attachment formula is located in Appendix 2, and an example of the data used in the formula is located in Appendix 3.

***Formula: (Space Allocation) x (Net Cost of Bare Pole) x (Carrying Cost)***

- **Space Allocation** - The share of cost based upon amount, types, and purposes of space on the pole. (See Appendix 4)
- **Net Cost of a Bare Pole** – 85% of the net pole investment divided by the number of poles.
- **Carrying Cost** - Annual operating expenses associated with pole ownership. (Administrative, Maintenance, Depreciation, and Taxes as a percent of net plant plus input for return on investment.)

Once the LPC is applying the rate derived from the fully allocated cost methodology, then the LPC may use the Handy Whitman Index to annually escalate the pole attachment rate. Also, TVA would expect pole attachment counts to be updated in a reasonable cycle time to ensure accurate revenue collection to cover cost.

### Implementation

Contingent upon TVA Board approval, TVA and LPCs should enter into an agreement no later than January 2017 to put the new methodology and rate into effect, some of which will be transitioned over time. TVA expects LPC's financial and accounting records to be accurate and urges LPCs to begin reviewing accounting information now. TVA recognizes that some LPCs may need this additional time (until January 2017) to review and reconcile pole plant accounting data.

Attachment B - Appendix 3

Appendix 1

Guideline Adjustment Scale:

Dollar Variance	Transition Period *	Monthly - Adjustment (+/-)	
		Low	High
\$ 0 - \$ 5	Immediate action	\$ -	\$ 0.42
\$ 6 - \$10	No more than 2 years	\$ 0.21	\$ 0.42
\$11 - \$20	No more than 3 years	\$ 0.31	\$ 0.56
\$21 - \$30	No more than 4 years	\$ 0.44	\$ 0.63
\$31 or greater	No more than 5 years	\$ 0.52	\$ > 0.52

\* Transition period begins once current contractual agreements have expired.

Appendix 2

Pole Attachment Formula Components

**Definitions:** For purposes of this Exhibit, the following definitions shall apply, and all financial data have been obtained from the local power companies (LPCs) most recent Annual Report to the Tennessee Valley Authority:

**"Administrative Charge"** shall mean the total of all of the LPCs' administrative and general expenses shown in all of the Sample LPCs' FERC Account 625 (which is a totaling account for FERC Accounts 920, 921, 923-926, 929 & 930) divided by the total of all of the LPCs' electric plant, net of accumulated depreciation.

**"Carrying Costs"** shall mean the sum of the Administrative Charge, the Depreciation Charge, the Maintenance Charge, the Rate of Return, and the Tax-Equivalent Charge, all of which shall be stated as a percentage of net plant.

**"Depreciation Charge"** shall mean the median depreciation rate for the LPCs' multiplied by the quotient of the LPCs' gross FERC Account 364 plant divided by the LPCs' net FERC Account 364 plant.

**"Maintenance Charge"** shall mean the three year average of the LPCs' FERC Account 593 plant expenses divided by the sum of the Sample LPCs' plant shown in FERC Accounts 364, 365 and 369, net of accumulated depreciation.

**"Pole Cost"** shall mean eighty-five percent (85%) of the pole investment as shown in the LPCs' FERC Account 364, net of accumulated depreciation, divided by the total number of Sample LPC utility poles included in FERC Account 364.

**"Rate of Return"** shall mean eight and a half percent (8.5%).

**"Space Allocation"** shall mean twenty-six and 96/100 percent (26.96%), which is based upon an average 37.5 foot pole and an average of three parties per pole, including the pole owner.

**"Tax and Tax-Equivalent Charges"** shall mean the quotient of the LPCs' tax and/or tax-equivalent payments shown in FERC Account 408.1 divided by all of the LPCs' electric plant, net of accumulated depreciation.

### Appendix 3 Pole Attachment Formula Example

Net Cost of a Bare Pole	\$	278.56 (a)
Carrying Charge		26.81% (b)
Annual Cost of Ownership ( a*b=X)	\$	74.68 X
Space Allocation (% of Total Pole)		
Fully Allocated Cost Formula (B+(1/(A)*C)+(1/A)*E)/(D+E)		26.96% Y
Maximum Rate per Pole		
Fully Allocated Cost Formula ( X*Y=Z)	\$	20.13 Z

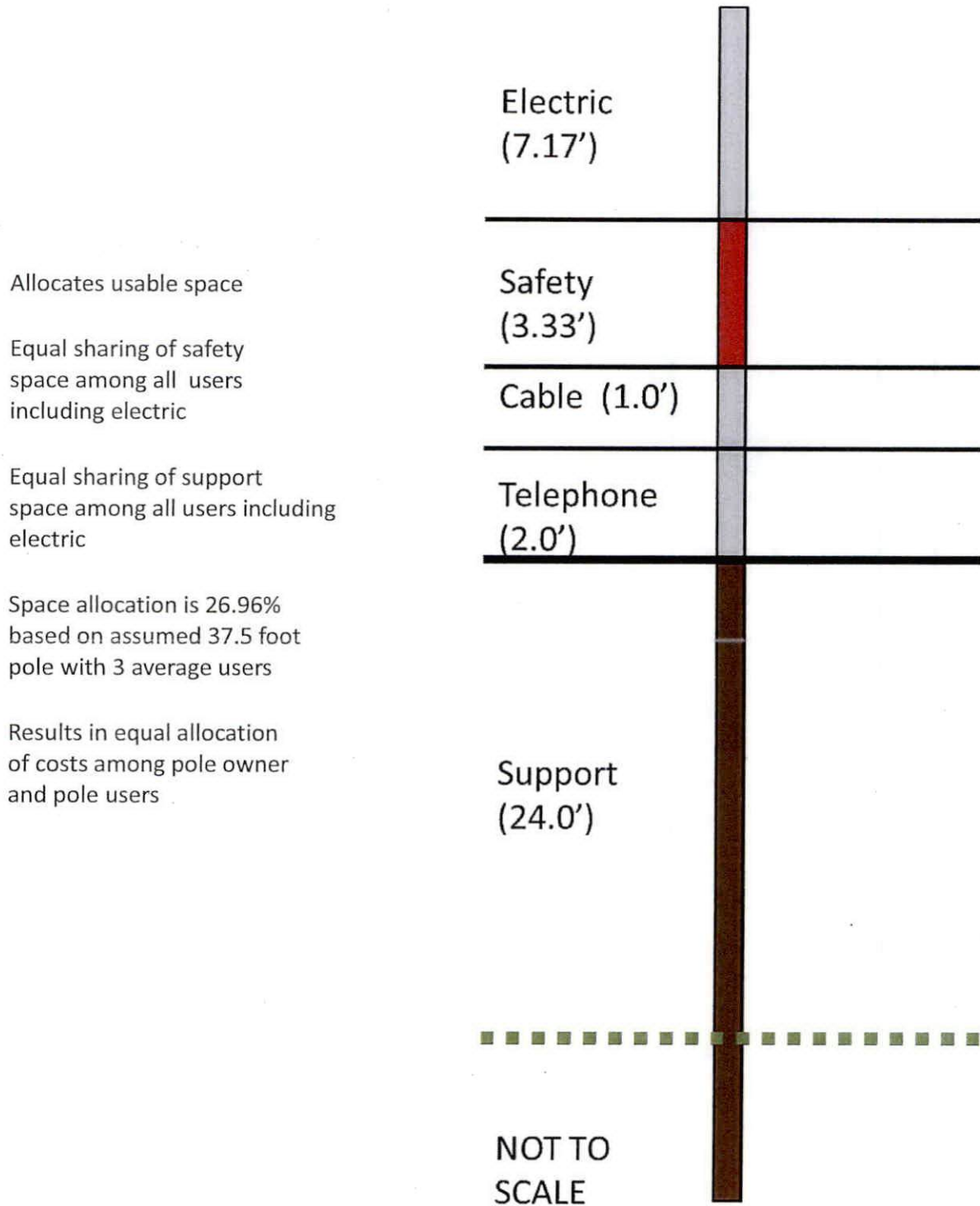
<b>Space Allocation:</b> Assumptions include 3 entities attaching to 37.5' pole.		
(A) Number of Attaching Parties	3	
(B) Space Occupied by Attaching Party	1	feet
(C) Safety Space	3.33	feet
(D) Total Usable Space	13.5	feet
(E) Total Support Space (6' Ground + 18' Clearance)	24	feet

<b>Net Cost of a Bare Pole:</b>		
(1) Gross Pole Investment ( FERC A/C 364)	\$	7,545,190.30
(2) Depreciation Reserve ( FERC A/C 108.364)	\$	1,972,753.62
(3) Gross Plant Investment ( FERC A/C 364, 365,& 369)	\$	14,998,392.35
(4) Net Investment (Poles) (L(1)-L(2))	\$	5,572,436.68
(5) Net Investment (Bare Pole) (L(4) x .85 )	\$	4,736,571.18
(6) Number of Poles		17,004
(7) Net Cost of a Bare Pole (L(5)/L(6))	\$	278.56 (a)

<b>Carrying Charge:</b>		
(1) Administrative Charge	3.26%	
(2) Maintenance Charge	8.75%	
(3) Depreciation Charge	4.06%	
(4) Taxes	2.23%	
(5) Return on Investment	8.50%	
(6) Total Carrying Charge Rate (L(1)+L(2)+L(3)+L(4)+L(5))		26.81% (b)

<b>Administrative Charge</b>		
(1) A&G Expense (TVA AR Rpt Item 625 & a/c 935 -page 6)	\$	1,321,181.13
(2) Net Plant Investment ( TVA AR Rpt item 6-Page 1)	\$	40,478,879.32
(3) Administrative Charge (L(1)/L(2))		3.26%
<b>Maintenance Charge</b>		
(1) Maintenance Exp.(Three yr avg. -TVA AR a/c 593-Page 6)	\$	855,593.57
(2) Net Investment (Pole Accounts 364, 365 & 369)	\$	9,779,762.19
(3) Maintenance Charge (L(1)/L(2))		8.75%
<b>Depreciation Charge</b>		
(1) Depreciation Rate ( TVA AR Rpt -page 11)		3.00%
(2) Gross Pole Investment (Account 364)	\$	7,545,190.30
(3) Net Pole Investment (Account 364)	\$	5,572,436.68
(4) Depreciation Charge (L(1) x (L(2)/L(3))		4.06%
<b>Taxes</b>		
(1) Total Current and Deferred Taxes ( TVA AR a/c 408 Property -pg 29)	\$	902,919.19
(2) Net Plant Investment	\$	40,478,879.32
(3) Taxes (L(1)/L(2))		2.23%
<b>Return on Investment</b>		
Authorized by Regulatory Authority		8.50%

Attachment B - Appendix 3  
Appendix 4  
Space Allocation:  
The Fully Allocated Cost Method





## Attachment B - Appendix 3

### POLE ATTACHMENT FEE CALCULATION FISCAL YEAR ENDED JUNE 30, 2014

Select Local Power Company

Input Fiscal Year of Data

2014

This template is a tool to calculate pole attachment rates under TVA's proposed pole attachment recommendation. To use, input data specific to the local power company for the gray sections only. All other numbers calculate automatically. Source locations for the required data are noted in blue. For any questions or help populating the required data, please contact Laura McDade at (423) 751-2474 or ldmcdade@tva.gov.

#### DATA INPUTS

Data required for gray sections only.

##### Plant Account Data

Total Plant

Item 1 - Gross Plant

Item 2 - Depreciation

Net Plant

2014

\$	-	ANNUAL REPORT, PAGE 1
\$	-	ANNUAL REPORT, PAGE 1
\$	-	

2014

Gross Plant	Depreciation	Net Plant
ANNUAL REPORT, PAGES 9 & 11		
\$	-	\$ -
\$	-	\$ -
\$	-	\$ -
\$	-	\$ -

Plant Related to Poles

Account 364 - Poles, Towers, and Fixtures

Account 365 - Overhead Conductors & Devices

Account 369 - Services

Total

##### Account 364 Data

Number of Poles Pole

Depreciation (% Gross Plant)

2014

-	LPC INTERNAL POLE COUNT RECORDS
0.00%	ANNUAL REPORT, PAGE 11

##### Expense Data

Item 625 + Account 935 - Administrative & General Expense

Account 408.1 - Property Taxes Net

Current Deferred Operating Income Taxes Net

Noncurrent Deferred Operating Income Taxes

2014

\$	-	ANNUAL REPORT, PAGE 6
\$	-	ANNUAL REPORT, PAGE 29
\$	-	LPC INTERNAL ACCOUNTING RECORDS
\$	-	LPC INTERNAL ACCOUNTING RECORDS

Account 593 - Overhead Lines Distribution Maintenance

2012

2013

2014

3 Year Average

ANNUAL REPORT, PAGE 6

\$	-
\$	-
\$	-
\$	-

Note: Confirm that account 593 captures maintenance expenses for accounts 364, 365 & 369

##### Rate of Return

Authorized by Regulatory Authority

8.5%

#### CALCULATIONS

##### Space Allocation Scenarios

3 party, 1 foot

(A) Number of Attaching Parties

3

(B) Space Occupied by Attaching Party

1

(C) Safety Space

3.33

(D) Total Usable Space

13.50

(E) Total Support Space (6' Ground + 18' Clearance)

24

Space Allocation (% of Total Pole)

Fully Allocated Cost Formula  $(B + (1/(A * C)) + (1/A * E)) / (D + E)$

26.96%

Net Cost of a Bare Pole (Breakdown below)

NA

Carrying Charge Rate (Breakdown below)

NA

Annual Cost of Ownership

NA

Maximum Rate per Pole (Space Allocation % x Annual Cost)

3 party, 1 foot

Fully Allocated Cost Formula

NA



# Attachment B - Appendix 3

## POLE ATTACHMENT FEE CALCULATION FISCAL YEAR ENDED JUNE 30, 2014

Select Local Power Company	Input Fiscal Year of Data
	2014

### Breakdown of Inputs in Calculations

#### Net Cost of a Bare Pole

(1) Gross Pole Investment	\$	-
(2) Depreciation Reserve	\$	-
(3) Net Current Deferred Operating Income Taxes	\$	-
(4) Net Noncurrent Deferred Operating Income Taxes	\$	-
(5) Net Deferred Operating Income Taxes (L(3)+L(4))	\$	-
(6) Gross Plant Investment	\$	-
(7) Net Deferred Operating Income Taxes (Poles) ((L(1)/L(6) x L(5))		NA
(8) Net Investment (Poles) (L(1)-L(2)-L(7))		NA
(9) Net Investment (Bare Pole) (L(8) x .85 )		NA
(10) Number of Poles		-
(11) Net Cost of a Bare Pole (L(9)/L(10))		NA

#### Carrying Charge Rate

##### Carrying Charge

(1) Administrative Charge	NA
(2) Maintenance Charge	NA
(3) Depreciation Charge	NA
(4) Taxes	NA
(5) Return on Investment	8.5%
(6) Total Carrying Charge Rate (L(1)+L(2)+L(3)+L(4)+L(5))	NA

##### Administrative Charge

(1) A&G Expense (625 + 935)	\$	-
(2) Net Plant	\$	-

##### Investment

(3) Administrative Charge (L(1)/L(2))	NA
---------------------------------------	----

##### Maintenance Charge

(1) Average Maintenance Expense (593)	\$	-
(2) Net Investment (Pole Accounts 364, 365 & 369)	\$	-
(3) Maintenance Charge (L(1)/L(2))		NA

##### Depreciation Charge

(1) Depreciation Rate		0.00%
(2) Gross Pole Investment (Account 364)	\$	-
(3) Net Pole Investment (Account 364)	\$	-
(4) Depreciation Charge (L(1) x (L(2)/L(3))		NA

##### Taxes

(1) Total Current and Deferred Taxes	\$	-
(2) Net Plant Investment	\$	-
(3) Taxes (L(1)/L(2))		NA

##### Return on Investment

Authorized by Regulatory Authority	8.5%
------------------------------------	------

# WACC with Public Utility Basis Capital Structure

- Using a Public Power Utility Basis Model implied LPC capital structure and applying a CAPM approach to derive targeted ROE, a reasonable WACC for LPCs would be 8.5%

Components	TVA Equivalent Debt	Lower Cost Debt	Lowest Cost Debt
Debt Rate of Return	7.0%	6.8%	6.6%
Equity Rate of Return	8.7%	8.7%	8.7%
<b>WACC RESULTS</b>			
LPC Average	8.4%	8.3%	8.3%
LPC Minimum	7.6%	7.5%	7.4%
LPC Maximum	8.7%	8.7%	8.7%

- The table above does not include any adjustments for project specific risk, which should be considered when calculating hurdle rates for project analysis
- The equity return of 8.7% is estimated using the Capital Asset Pricing Model
 
$$r_i = r_{rf} + \beta(R_m - r_{rf})$$

$$r_{rf} = 4.08\% \text{ (30 year average of 10-year US Treasury Bond Yield)}$$

$$\beta = 0.93 \text{ (debt/equity per Utility Basis model; utility unlevered Barra beta estimate of 0.42*)}$$

$$(R_m - r_{rf}) = 5\% \text{ (research-based long-term average equity return)**}$$

\* beta estimate sourced from January 2015 update of Betas by Sector by Aswath Damodaran, Stern School of Business, NYU

\*\* 5% was commonly used prior to 2008, after which all equity market risk premium have significantly increased. A light downward trend is observed after 2010 according to a KPMG study in January 2015.

I/A  
m14 / m15

# EXHIBIT PDK 15

BEFORE THE STATE OF NORTH CAROLINA  
UTILITIES COMMISSION  
RALEIGH

TIME WARNER CABLE  
SOUTHEAST LLC,  
Complainant,

v.

CARTERET-CRAVEN ELECTRIC  
MEMBERSHIP CORPORATION,  
Respondent.

TIME WARNER CABLE  
SOUTHEAST LLC,  
Complainant,

v.

JONES-ONSLow ELECTRIC  
MEMBERSHIP CORPORATION,  
Respondent.

TIME WARNER CABLE  
SOUTHEAST LLC,  
Complainant,

v.

SURRY-YADKIN ELECTRIC  
MEMBERSHIP CORPORATION,  
Respondent.

UNION ELECTRIC  
MEMBERSHIP  
CORPORATION d/b/a UNION  
POWER COOPERATIVE,  
Complainant-Petitioner,

v.

TIME WARNER CABLE  
SOUTHEAST LLC  
Respondent-Petitioner

DOCKET NO. EC-55, SUB 70  
DOCKET NO. EC-43, SUB 88  
DOCKET NO. EC-49, SUB 55  
DOCKET NO. EC-39, SUB 44

**DECLARATION OF J. AARON GEORGE**

I, James Aaron George, pursuant to 28 U.S.C. § 1746, declare as follows:

1. I am an attorney admitted pro hac vice to practice before this Commission.

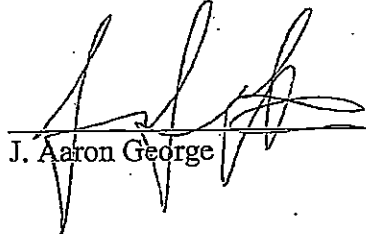
I am an associate with Sheppard Mullin Richter & Hampton LLP, attorney of record for Time Warner Cable Southeast, LLC in the above-captioned dockets. I have personal knowledge of the information set forth in this Declaration.

2. I submitted a request on January 13, 2017 to the Tennessee Valley Authority ("TVA") under the Freedom of Information Act, 5 U.S.C. § 552 ("FOIA"), for documents related to the February 11, 2016, resolution of the TVA Board of Directors regarding pole attachments.

3. The documents attached to this declaration are true and correct copies of documents provided to me by the TVA in response to my FOIA request.

I declare under penalty of perjury that the foregoing is true and correct.

Executed June 14, 2017, in Washington, DC.

  
\_\_\_\_\_  
J. Aaron George



# **LPC Pole Attachment Rate Regulation**

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Lunch & Learn  
January 15, 2016





# Rates Impact Under Proposed Methodology

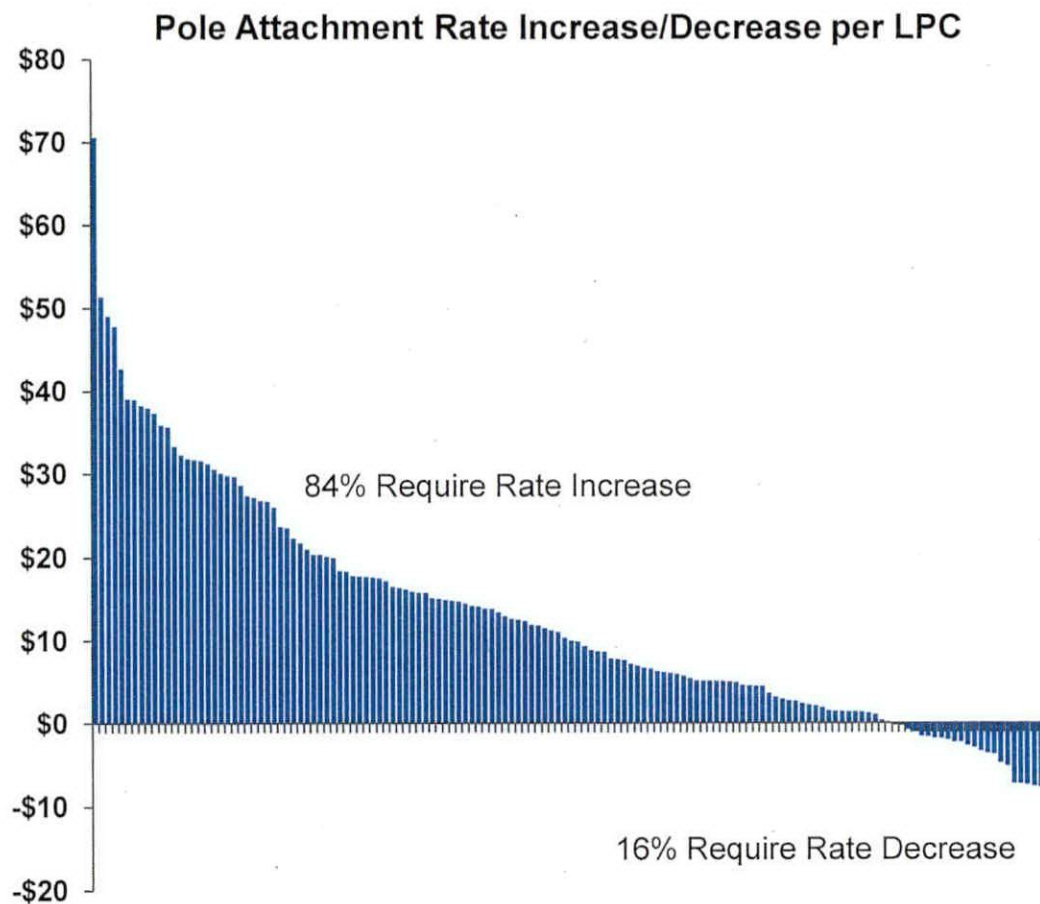
New mid-point ~ \$30 vs. \$18 today

Minimum rate \$7.60

Maximum rate \$85.50

30% LPCs are within \$5 of new rate

50% LPCs are within \$10 of new rate

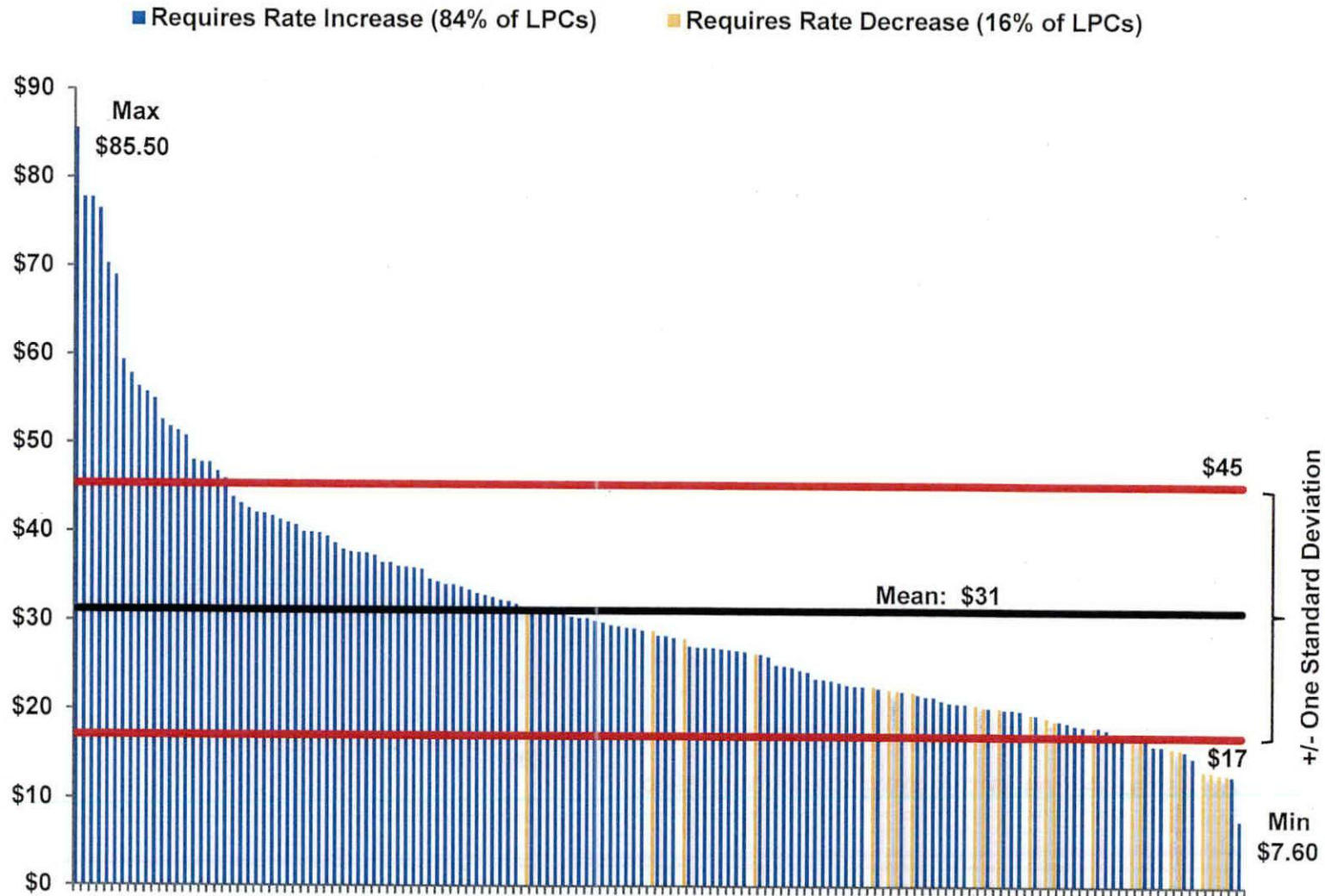


*The new rate for each LPC is based on three attaching parties using a 37.5' pole height and a 15% discount factor for cross arms and other appurtenances. When LPCs use system-specific data and reconcile pole accounting data, rate impacts may change.*



# Rates Impact Under Proposed Methodology

Potential New Pole Attachment Rates by LPC





# POLE ATTACHMENT RATE TEMPLATE WORKSHOP

APRIL - MAY 2016

**Barry Barnett, Regulatory Assurance**



# Calculating the Number of Attachers



For purposes of calculating the space allocation component of the pole attachment rate methodology, TVA has established standard assumptions for the number of attachers based on rural and urban classifications.

LPC's should use this Standard Assumption unless the LPC provides sufficient justification to TVA that it has readily available actual data for calculating the number of attachers.



# Standard Assumption

Under the Standard Assumption, each pole is presumed to have:

- 3 attaching entities for RURAL ( $\leq 40$  customers per mile)
- *5 attaching entities for URBAN ( $> 40$  customers per mile)*

Customers per mile is calculated by:

- *Total number of customers divided by the total miles of line*

Standard Assumption - Rural

- 126 TVA LPCs fall into the Rural category\*

Standard Assumption - Urban

- 28 TVA LPCs fall into the Urban category\*

*\*Source: DARS Database (Data as of June 2015)*



# Example –Standard Assumption

**Example  
(3 Attachers)**

**Example  
(5 Attachers)**

				Space Allocation - Pole Attachment Template					
								Rural	Urban
Total poles in Sample	10			(A) Number of Attaching Parties				3.00	5.00
Total poles used by Communication Attacher	N/A			(B) Space Occupied by Attaching Party				1	1
				(C) Safety Space				3.33	3.33
				(D) Total Usable Space				13.5	13.5
				(E) Total Support Space				24.0	24.0
System Average # of Attaching Parties		3 or 5		Space Allocation (% of Total Pole)					
				Fully Allocated Cost Formula				28.44%	17.69%
# of cable attachments	N/A			Net Cost of a Bare Pole	\$	400.00	\$	400.00	
# of telecom attachments	N/A			Carrying Charge Rate		25.00%		25.00%	
				Annual Cost of Ownership	\$	100.00	\$	100.00	
Total number of comm. attachments	N/A			Maximum Rate per Pole (Space Allocation : 3.0 Party, 1 Foot 5.0 Party, 1 Foot					
				Fully Allocated Cost Formula	\$	28.44	\$	17.69	

\* Based on \$100 pole ownership cost times space allocation for 1' of space occupied using an average number of attachers with 37.5' pole height per option above.

# Actual System Data Approach

LPCs may use actual system data with sufficient justification and TVA approval. There are two potential approaches.

## Approach 1 – LPC Known System Data

- Other considerations in calculating average number of attaching parties:
  - Data needed to calculate average number of attaching parties
    - Number of poles without communication attachers
    - Number of communication attaching parties
    - Number of attachments
  - *Some LPCs calculate the number using their mapping system software or engineering estimates (e.g., GIS)*



# Actual System Data Approach

## Approach 2 – Probability Method (Template Provided)

- Known: number of communication attaching parties
- Known: number of attachments
- Unknown: number of poles without communication attachers
  - *Uses probability to estimate system average number of attaching parties*

# Approach 1 – LPC Known System Data

Calculate average number of attaching entities based on known system data				Space Allocation - Pole Attachment Template			
Total poles in Sample	10			(A) Number of Attaching Parties		2.50	
				(B) Space Occupied by Attaching Party		1	
Total poles used by Communication Attacher	8			(C) Safety Space		3.33	
				(D) Total Usable Space		13.5	
				(E) Total Support Space (Ground: 2' + 10% total height; Clearance: 18'; rounded to nearest foot)		24.0	
System Average # of Attaching Parties		2.50		Space Allocation (% of Total Pole)			
				Fully Allocated Cost Formula $(B + (1/(A-1)*C) + (1/A)*E)/(D+E)$		34.19%	
# of cable attachments	8			Net Cost of a Bare Pole (Breakdown below)		\$ 400.00	
# of telecom attachments	4			Carrying Charge Rate (Breakdown below)		25.00%	
				Annual Cost of Ownership		\$ 100.00	
Total number of comm. attachments	12						
				Maximum Rate per Pole (Space Allocation % x Annual Cost)		2.5 Party, 1 Foot	
				Fully Allocated Cost Formula		\$ 34.19	
* 12 communication attachers plus 8 EL poles with communication attachers divided by 8 EL poles = 2.50							

\* Based on \$100 pole ownership cost times space allocation for 1' of space occupied using an average number of attachers with 37.5' pole height per option above.

# Approach 2 - Probability Method Template

POLE ATTACHMENT - AVERAGE NUMBER OF ATTACHING PARTIES		
Pre-decisional / deliberative process privilege		
Number of Attachments on Electric Owned Poles		
Total Number of Distribution Poles		10
Total Number of Distribution Poles With Communication Attachments		9
Total Number of Distribution Poles With Electric Attachments (Only)		1
Cable / Broadband / Fiber Attaching Parties:		
Attaching Party # 1	8	20%
Attaching Party # 2	-	0%
Attaching Party # 3	-	0%
Attaching Party # 4	-	0%
Attaching Party # 5	-	0%
Total Cable /BB/ Fiber Attaching Parties	8	20%
Telephone Attaching Parties:		
Attaching Party # 1	4	60%
Attaching Party # 2	-	0%
Attaching Party # 3	-	0%
Attaching Party # 4	-	0%
Attaching Party # 5	-	0%
Total Telephone Attaching Parties	4	60%
Probability of Electric Poles Only		12%
Number of Average Attaching Parties on Electric Owned Pole:		
Total Cable /BB / Fiber Attachments	8	
Total Telephone Attachments	4	
Total Electric Attachments	9	
Total of All Attachments	21	
Divide By Actual Poles With Attachments	9	
Average Number of Attaching Parties:	2.36	

Enter data in blue highlighted areas only

$1 - (8 \text{ divided by } 10) = 20\%$  probability of something other than cable is on the pole.

$1 - (4 \text{ divided by } 10) = 60\%$  probability of something other than telephone is on the pole.

Probability in the sample of poles with electric attachments only of 12% is derived by multiplying 20% by 60%.



# Approach 2 – Probability Method

The TVA Template Probability Method requires the LPC to provide and input data to calculate their average number of retail communication attachers.

Average number of attaching parties			Pole Attachment Rate Template		
Total poles in sample	10		Space Allocation - Pole Attachment Template		
Total poles used by Communication Attacher	?		(A) Number of Attaching Parties		2.36
			(B) Space Occupied by Attaching Party		1
			(C) Safety Space		3.33
			(D) Total Usable Space		13.5
System Average # of Attaching Parties		2.36	(E) Total Support Space		24.0
			Space Allocation (% of Total Pole)		
			Fully Allocated Cost Formula		36.31%
# of cable attachments	8		Net Cost of a Bare Pole	\$	400.00
# of telecom attachments	4		Carrying Charge Rate		25.00%
			Annual Cost of Ownership	\$	100.00
Total number of comm. attachments	12		Maximum Rate per Pole (Space Allocation 1' 2.4 Party, 1 Foot)		
			Fully Allocated Cost Formula	\$	36.31

\* Based on \$100 pole ownership cost times space allocation for 1' of space occupied using an average number of attachers with 37.5' pole height per option above.

# Rate Comparisons of Attaching Parties Calculation



Method	# of Attaching Parties	Rate (\$)
Standard Assumption – Rural	3.00	28.44
Standard Assumption – Urban	5.00	17.69
LPC Known System Data	2.50	34.19
Probability Method	2.36	36.31

- Based on \$100 pole ownership cost times space allocation for 1' of space occupied using an average number of attachers with 37.5' pole height per option above.
- Note: The number of attaching parties for the probability approach may not always be less than known system data approach.

---

**From:** Magee, Thomas  
**Sent:** Tuesday, June 02, 2015 11:08 AM  
**To:** Brogdon, Jennifer N



**Cc:** Hallam, Mary Elizabeth; Richards, Jack B.  
**Subject:** RE: TVA Pole Attachment Questions

Jennifer:

Following up on our call in March about pole attachment regulation, we were wondering whether there have been any developments at TVA?

Please let us know if you have questions or if we can be of further assistance.

Thanks, Tom/Jack

**Thomas B. Magee, Partner**  
tel: 202.434.4128 | fax: 202.434.4646 | [magee@khlaw.com](mailto:magee@khlaw.com)  
1001 G Street, N.W., Suite 500 West | Washington, D.C. 20001



Please visit our website at [www.khlaw.com](http://www.khlaw.com) for additional information.

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**From:** Brogdon, Jennifer N [<mailto:jnbrogdon@tva.gov>]  
**Sent:** Friday, March 13, 2015 5:00 PM  
**To:** Magee, Thomas; Hallam, Mary Elizabeth  
**Cc:** Richards, Jack B.  
**Subject:** Re: TVA Pole Attachment Questions

Let's plan on it.

I'll be driving and available at 423/653-3246.

Sent from my iPad

On Mar 13, 2015, at 4:46 PM, Magee, Thomas <[Magee@khlaw.com](mailto:Magee@khlaw.com)> wrote:

TVA External Message. Please use caution when opening.

Ms. Brogdon:

Wednesday from 3:00-5:00 p.m. works for me. Not sure about Jack who is tied up in a meeting.

Shall we pencil in Wednesday at 3:00 p.m.?

Tx, Tom

---

**From:** Brogdon, Jennifer N [<mailto:jnbrogdon@tva.gov>]  
**Sent:** Friday, March 13, 2015 2:58 PM  
**To:** Magee, Thomas

**Cc:** Richards, Jack B.

**Subject:** Re: TVA Pole Attachment Questions

Thank you! I'd like to set some time up for us to chat soon. I am looking forward to talking with you. Do you have some availability next Wednesday afternoon, late? I'm available from 3E until late.

Sent from my iPhone

On Mar 13, 2015, at 2:52 PM, Magee, Thomas <[Magee@khlaw.com](mailto:Magee@khlaw.com)> wrote:

TVA External Message. Please use caution when opening.

Ms. Brogden:

The FCC's municipal broadband order affecting the Chattanooga EPB was released today:

FCC RELEASES MEMORANDUM OPINION AND ORDER PREEMPTING CERTAIN CHALLENGED PROVISIONS OF TENNESSEE AND NORTH CAROLINA LAW RESTRICTING MUNICIPAL PROVISION OF BROADBAND SERVICE. Granted the preemption petition of the Electric Power Board of Chattanooga, TN, and granted in part the preemption petition of the City of Wilson, NC, finding that they are barriers to broadband infrastructure investment and thwart competition. (Dkt No. 14-116 14-115 ). Action by: the Commission. Adopted: 02/26/2015 by MO&O. (FCC No. 15-

25). WCB [https://apps.fcc.gov/edocs\\_public/attachmatch/FCC-15-25A1.docx](https://apps.fcc.gov/edocs_public/attachmatch/FCC-15-25A1.docx)

[https://apps.fcc.gov/edocs\\_public/attachmatch/FCC-15-25A2.docx](https://apps.fcc.gov/edocs_public/attachmatch/FCC-15-25A2.docx)

[https://apps.fcc.gov/edocs\\_public/attachmatch/FCC-15-25A3.docx](https://apps.fcc.gov/edocs_public/attachmatch/FCC-15-25A3.docx)

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[https://apps.fcc.gov/edocs\\_public/attachmatch/FCC-15-25A5.docx](https://apps.fcc.gov/edocs_public/attachmatch/FCC-15-25A5.docx)

[https://apps.fcc.gov/edocs\\_public/attachmatch/FCC-15-25A6.docx](https://apps.fcc.gov/edocs_public/attachmatch/FCC-15-25A6.docx)

[https://apps.fcc.gov/edocs\\_public/attachmatch/FCC-15-25A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/FCC-15-25A1.pdf)

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[https://apps.fcc.gov/edocs\\_public/attachmatch/FCC-15-25A3.pdf](https://apps.fcc.gov/edocs_public/attachmatch/FCC-15-25A3.pdf)

[https://apps.fcc.gov/edocs\\_public/attachmatch/FCC-15-25A4.pdf](https://apps.fcc.gov/edocs_public/attachmatch/FCC-15-25A4.pdf)

[https://apps.fcc.gov/edocs\\_public/attachmatch/FCC-15-25A5.pdf](https://apps.fcc.gov/edocs_public/attachmatch/FCC-15-25A5.pdf)

[https://apps.fcc.gov/edocs\\_public/attachmatch/FCC-15-25A6.pdf](https://apps.fcc.gov/edocs_public/attachmatch/FCC-15-25A6.pdf)

Regards, Tom Magee

---

**From:** Magee, Thomas

**Sent:** Thursday, February 26, 2015 5:51 PM

**To:** Jennifer Brogden ([jnbrogdon@tva.gov](mailto:jnbrogdon@tva.gov))

**Cc:** Richards, Jack B.

**Subject:** RE: TVA Pole Attachment Questions

Ms. Brogden:

In advance of our discussion about TVA pole attachment issues, we thought you'd be interested in today's FCC decisions (i) to regulate the Internet, and (ii) to preempt Tennessee from limiting the broadband service of Chattanooga's Electric Power Board.

The FCC's Public Notices are attached.

Please let us know if you have any questions.

Best regards, Tom

---

**From:** Magee, Thomas  
**Sent:** Friday, February 20, 2015 4:09 PM  
**To:** Jennifer Brogden ([jnbrogdon@tva.gov](mailto:jnbrogdon@tva.gov))  
**Cc:** Richards, Jack B.  
**Subject:** TVA Pole Attachment Questions

Ms. Brogden:

We understand from Mike Knotts that TVA may have questions about pole attachments that we can answer for you.

Are you available for a call (no charge, of course) with my partner Jack Richards and me on Monday? We're available Monday from 11:00–12:00 or any time after 2:00 p.m.

We're also available later in the week if Monday doesn't work.

We look forward to talking with you.

Best Regards, Tom Magee

Thomas B. Magee, Partner  
tel: 202.434.4128 | fax: 202.434.4646 | [magee@khlaw.com](mailto:magee@khlaw.com)  
1001 G Street, N.W., Suite 500 West | Washington, D.C. 20001



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**From:** Matt Bernauer  
**To:** Holt, Tiffany Sheree  
**Cc:** "Dan Burns - Muscle Shoals EB"; South, Alan C  
**Subject:** Pole Attach Spreadsheet  
**Date:** Monday, March 07, 2016 11:13:22 AM  
**Attachments:** image001.png  
Pole Attachment Calculation - Muscle Shoals.xlsx

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TVA External Message. Please use caution when opening.

Tiffany,

Attached is our preliminary pole attach worksheet. I believe the rate is too high and the 15% discount factor on account 364 is not high enough for our system to accurately reflect our true cost of a bare pole. I just want to be clear that we do not intend to use this as our rate "as is."

As you know we have seen a lot of growth and have installed a lot of new facilities in the past 10-15 years which drives up our un-depreciated plant value but we also have done a lot of cross-arm only change-outs, and we almost exclusively use expensive fiberglass cross-arms and triple helix anchors as well as a lot of expensive insulated guy links since many of our facilities are located in tight spaces in town. All of these items are captured in 364, and from a very preliminary review of our annual material capitalized summaries, I feel certain that we need to use a custom discount factor.

I would like to talk sometime soon and discuss what TVA would consider as "proper" justification for changing the 85/15 split before I spend a lot more time on this. I am specifically interested in what other utilities across that valley have done to justify changing this discount factor.

Thanks,

Matt

**Matt Bernauer, PE**  
General Manager



Muscle Shoals Electric Board  
1015 Avalon Avenue  
PO Box 2547  
Muscle Shoals, AL 35662  
256-386-9290 - Office  
256-386-9293 - Fax

[mbernauer@mseb.net](mailto:mbernauer@mseb.net)

**POLE ATTACHMENT FEE CALCULATION**  
**FISCAL YEAR ENDED JUNE 30, 2015**

Muscle Shoals

155

Input Fiscal Year of Data

2015

This template is a tool to calculate pole attachment rates under TVA's proposed pole attachment recommendation. To use, input data specific to the local power company for the gray sections only. All other numbers calculate automatically. Source locations for the required data are noted in blue.

For any questions or help populating the required data, please contact Laura McDade at (423) 751-2474 or lmcdade@tva.gov.

**DATA INPUTS***Data required for gray sections only.***Plant Account Data****Total Plant**

2015

Item 1 - Gross Plant

\$ 41,800,418

ANNUAL REPORT, PAGE 1

Item 2 - Depreciation

\$ 18,701,091

ANNUAL REPORT, PAGE 1

Net Plant

\$ 23,099,326

2015

Gross Plant

Depreciation

Net Plant

**Plant Related to Poles**

ANNUAL REPORT, PAGES 9 &amp; 11

Account 364 - Poles, Towers, and

\$ 8,370,070

\$ 3,428,281

\$ 4,941,789

Account 365 - Overhead Conduct

\$ 4,787,878

\$ 1,888,774

\$ 2,899,104

Account 369 - Services

\$ 3,808,314

\$ 1,614,474

\$ 2,193,840

Total

\$ 16,966,262

\$ 6,931,529

\$ 10,034,733

**Account 364 Data**

2015

Number of Poles

16,988

LPC INTERNAL POLE COUNT RECORDS

Pole Depreciation Rate

3.00%

ANNUAL REPORT, PAGE 11

**Expense Data**

2015

Item 625 + Account 935 - Administrative

\$ 1,863,674

ANNUAL REPORT, PAGE 6

Account 408.1 - Property Taxes

\$ 831,890

ANNUAL REPORT, PAGE 29

Net Current Deferred Operating Income Taxes, If Any

LPC INTERNAL ACCOUNTING RECORDS

Net Noncurrent Deferred Operating Income Taxes, If Any

LPC INTERNAL ACCOUNTING RECORDS

**Account 593 - Overhead Lines Distribution Maintenance**

ANNUAL REPORT, PAGE 6

2013

\$ 780,592

2014

\$ 784,406

2015

\$ 1,065,601

3 Year Average

\$ 876,866

Note: Confirm that account 593 captures maintenance expenses for accounts 364, 365 & 369

**Space Allocation Data**

Average Number of Attaching Parties

3.0

Use actual average for LPC.

Pole Height (ft)

37.5

Default: 37.5 ft. Can change with proper documentation.

**Discount Factor for Pole**

Discount Factor for Cross Arms and

15%

Default: 15%. Can change with proper documentation.

**Rate of Return**

Authorized by Regulatory Authority

8.5%



**POLE ATTACHMENT FEE CALCULATION**  
**FISCAL YEAR ENDED JUNE 30, 2015**

**CALCULATIONS**

**Space Allocation**

(A) Number of Attaching Parties	3.0	3.0
(B) Space Occupied by Attaching Parties	1	2
(C) Safety Space	3.33	3.33
(D) Total Usable Space	13.5	13.5
(E) Total Support Space (Ground: 2' - rounded to nearest foot)	24.0	24.0
Space Allocation (% of Total Pole)		
Fully Allocated Cost Formula (B+E)	28.44%	31.11%
Net Cost of a Bare Pole (Breakdown below)	\$ 601.10	\$ 601.10
Carrying Charge Rate (Breakdown below)	29.66%	29.66%
Annual Cost of Ownership	\$ 178.29	\$ 178.29

Maximum Rate per Pole (Space Allocation)	3.0 Party, 1' Foot	3.0 Party, 2' Foot
Fully Allocated Cost Formula	\$ 50.70	\$ 55.46

**Breakdown of Inputs**

**Net Cost of a Bare Pole**

(1) Gross Pole Investment	\$	8,370,070
(2) Depreciation Reserve	\$	3,428,281
(3) Net Current Deferred Operating Income Taxes	\$	-
(4) Net Noncurrent Deferred Operating Income Taxes	\$	-
(5) Net Deferred Operating Income Taxes ((L(3)+L(4)))	\$	-
(6) Gross Plant Investment	\$	16,966,262
(7) Net Deferred Operating Income Taxes (Poles) ((L(1)/L(6)) x L(5))	\$	-
(8) Net Investment (Poles) (L(1)-L(2)-L(7))	\$	4,941,789
(9) Net Investment (Bare Pole) (L(8) x (1 - Discount Factor see above))	\$	4,200,521
(10) Number of Poles		6,988
(11) Net Cost of a Bare Pole (L(9)/L(10))	\$	601.10

**Carrying Charge Rate**

**Carrying Charge**

(1) Administrative Charge	3.74%
(2) Maintenance Charge	8.74%
(3) Depreciation Charge	5.08%
(4) Taxes	3.60%
(5) Return on Investment	8.5%
(6) Total Carrying Charge Rate (L(1)+L(2)+L(3)+L(4)+L(5))	29.66%

**Administrative Charge**

(1) A&G Expense (625 + 935)	\$	863,674
(2) Net Plant Investment	\$	23,099,326
(3) Administrative Charge (L(1)/L(2))		3.74%

**Maintenance Charge**

(1) Average Maintenance Expense (593)	\$	876,866
(2) Net Investment (Pole Accounts 364, 365 & 369)	\$	10,034,733
(3) Maintenance Charge (L(1)/L(2))		8.74%

**Depreciation Charge**

(1) Depreciation Rate		3.00%
(2) Gross Pole Investment (Account 364)	\$	8,370,070
(3) Net Pole Investment (Account 364)	\$	4,941,789
(4) Depreciation Charge (L(1) x L(2)/L(3))		5.08%

**Taxes**

(1) Total Current and Deferred Taxes	\$	831,890
(2) Net Plant Investment	\$	23,099,326
(3) Taxes (L(1)/L(2))		3.60%

**Return on Investment**

Authorized by Regulatory Authority	8.5%
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**From:** Elizabeth Bowman [mailto:[Elizabeth.Bowman@kub.org](mailto:Elizabeth.Bowman@kub.org)]  
**Sent:** Tuesday, February 09, 2016 12:17 PM  
**To:** Barnett, J Barry  
**Cc:** Brøgdon, Jennifer N; John Gresham; Rick Powers; Sam Smiddy  
**Subject:** Re: optional method of calculating "average number of attaching parties"

TVA External Message. Please use caution when opening.

Hi Barry,

As per our discussion, I've recalculated KUB's "average number of attaching parties" excluding only poles with KUB alone attached. The results are as follows:

This is the relevant data as of 2/8/16 from our mapping records which are digital and updated daily:

1. Number of KUB owned poles with only KUB on the pole = 25,759
2. Number of KUB owned poles with communication companies (incl AT&T) attached (#3 minus #1)

attached = 95,958

3. Total number of KUB owned poles = 121,717

4. Total number of times any company (including KUB) is attached to a KUB owned pole = 297,033

Using this data to calculate an "average number of attaching parties" only on poles with attachments other than KUB, we subtract (1) from (4) to derive the total number of attachments associated with this subset of our poles:

A)  $297,033 - 25,759 = 271,274$ .

To calculate the average number of parties attached on a KUB owned pole which has attachments other than KUB, we divide the result from 'A' by #2.

$271,274 / 95,958 = 2.83$

After we spoke, I checked the total number of KUB owned poles with AT&T attachments and that value is only 68,764 which explains why the value calculated in our original proposal is less than 3.

Per your request, I've attached TVA's revised model with our 2015 accounting and pole count data and the value calculated as above for "average number of attaching parties". As we discussed, KUB does not have the accounting data to support a pole discount factor and thus we are using the default values for pole height and pole discount factor. The resulting rate is \$49.45.

We would be in favor of an option to use a default value of 3 for average number of attaching parties, which you mentioned is under discussion.

Let me know if you have any questions.

Thanks for your help!

Beih

Elizabeth Bowman | Business Management Analyst | Knoxville Utilities Board

445 S. Gay Street | Knoxville TN 37902

(865) 594-7361 Office | (865) 594-7408 Fax

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From: Elizabeth Bowman/RAS/KUB

To: "Jennifer Braggdon" <[JNBraggdon@tva.gov](mailto:JNBraggdon@tva.gov)>

Cc: John Gresham/PLT/KUB@KUB; Rick Powers/ENS/EAO/KUB@KUB; Sam Smiddy/ENS/EAO/KUB@KUB

Date: 02/08/2016 03:08 PM

Subject: optional method of calculating "average number of attaching parties"

Hi Jennifer,

We have a question concerning determination of the "average number of attaching parties." Would it be acceptable to calculate this value based on only the pool of KUB owned poles with any communications company attached (other than AT&T)? This would exclude poles with only KUB attached and poles with only KUB and AT&T attached.

Our concern with using a system wide average for all KUB owned poles and connections is that the proposed method is directed at communication companies other than those in reciprocal agreements (AT&T by far the largest of this group for KUB). KUB has a significant number of poles without attachments by parties other than KUB and AT&T and this decreases our system "average number of attaching parties" to 2.44. That value yields a pole rental rate of about \$58 in the new model which would be very difficult to defend and implement.

This is the relevant data as of 2/8/16 from our mapping records which are digital and updated daily:

1. Number of KUB owned poles with only KUB on the pole = 25,759
2. Number of KUB owned poles with only KUB and AT&T on the pole = 15,171
3. Number of KUB owned poles with communication companies (excl AT&T) attached (#4 minus #1 minus #2) attached = 80,787
4. Total number of KUB owned poles = 121,717
5. Total number of times any company (including KUB) is attached to a KUB owned pole = 297,033

Using this data to calculate an "average number of attaching parties" only on poles with attachments other than KUB and AT&T, we subtract (1) and two times (2) from (5) to derive the total number of attachments associated with this subset of our poles:

$$A) 297,033 - 25,759 - 30,342 = 240,932.$$

To calculate the average number of parties attached on a KUB owned pole which has attachments other than KUB and AT&T, we divide the result from 'A' by #3.

$$240,932 / 80,787 = 2.98$$

As you know, the model calculates the average cost of a bare pole on our system. We feel it is appropriate to allocate that cost based on the average number of parties on a pole occupied by the type of entity to be charged the derived rate (in general, communication companies not in reciprocal agreements with KUB).

Would this method be acceptable?

Thank you,  
Beth

Elizabeth Bowman | Business Management Analyst | Knoxville Utilities Board  
445 S. Gay Street | Knoxville TN 37902  
(865) 594-7361 Office | (865) 594-7408 Fax  
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## INFORMATION SHEET

PRESIDING: Finley, Beatty, Brown-Bland, Dockham, Patterson, and Clodfelter  
PLACE: Dobbs Building, Raleigh, NC  
DATE: December 18, 2017  
TIME: 1:30 p.m. – 4:48 p.m.  
DOCKET NO.: EC-23, Sub 50  
COMPANY: Blue Ridge Electric Membership Corporation  
DESCRIPTION: Blue Ridge Electric Membership Corporation, Petitioner, -v- Charter Communications Properties, LLC, Respondent  
VOLUME: 5

## APPEARANCES

### FOR BLUE RIDGE ELECTRIC MEMBERSHIP CORPORATION:

Pressly M. Millen, Esq.  
Charlotte Mitchell, Esq.  
Debbie W. Harden, Esq.  
Matthew F. Tilley, Esq.

### FOR CHARTER COMMUNICATIONS PROPERTIES, LLC:

Gardner F. Gillespie, Esq.  
J. Aaron George, Esq.  
Marcus W. Trathen, Esq.

## WITNESSES

Patricia Kravtin

## EXHIBITS

✓ Charter Kravtin Redirect Exhibit 1 (I/A)

✓ Exhibits 1 – 15 (A)

(Confidential Exhibit PDK 4, filed under seal)

Exhibits LL-1-16 (A)

+ LL-3

(Confidential Exhibits LL-7-9, filed under seal)

Rebuttal exhibits LL-17-25 (A)

(Confidential Exhibit LL-17, filed under seal)

COPIES ORDERED: Email including Confidential: George, Trathen, Millen, Mitchell, Harden, Tilley

REPORTED BY: Kim Mitchell

TRANSCRIPT PAGES: 156

TRANSCRIBED BY: Kim Mitchell

PREFILED PAGES:

DATE TRANSCRIBED: January 12, 2017

TOTAL: 156

**FILED**

**FEB 01 2018**

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