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December 14, 2010

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

RE: In the Matter of Implementation of Section 224 of the Act, WC Docket No. 07-245; A National Broadband Plan for our Future, GN Docket No. 09-51

Dear Ms Dortch:

On behalf of the Edison Electric Institute (EEI) and its member companies, please find forwarded with this letter the Supplemental Declaration of Jonathan Orszag and Allen Shampine (Supplemental Declaration) and Report of Kaustuv Chakrabarti (Report).

The Supplemental Declaration discusses in detail the likely effects of the Federal Communications Commission's proposal on infrastructure investment incentives and makes clear that this proposal does not adequately address incentives for future infrastructure investment. The Report follows upon the Declaration of Jonathan Orszag and Dr. Allen Shampine, which was filed in the above-referenced proceedings on October 4, 2010. The Report addresses the apportionment of pole space under the existing rental rate formula, which does not follow a cost-sharing approach that considers a pole's full capital costs and operating expenses. The Report explains that the resulting subsidy is not alleviated through the reimbursement of the

costs associated with make-ready work. Moreover, the Report makes clear that because the purpose of make-ready work is only to increase pole capacity, make-ready charges do not compensate electric utilities for recurring costs incurred due to the presence of the attachment. Finally, the Report also addresses the adjustments proposed by Patricia Kravtin, on behalf of National Cable Television Association, to the carrying charge elements and rebuttable presumptions in the Telecom Rate.

The Supplemental Declaration and the Report are being filed electronically using the Commission's Electronic Comment Filing System (ECFS) for inclusion in the record of the above-referenced proceedings.

If there are any questions concerning this matter, please feel free to contact the undersigned.

Respectfully submitted

/s/ Aryeh B. Fishman
Aryeh B. Fishman
Director, Regulatory Legal Affairs

John Caldwell
Director of Economics

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

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	)	
Implementation of Section 224 of the Act;	)	WC Docket No. 07-245
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To: The Commission

SUPPLEMENTAL DECLARATION OF

JONATHAN ORSZAG AND ALLAN SHAMPINE

Dated: November 2, 2010

I. INTRODUCTION

A. Qualifications

Jonathan Orszag

1. I am a Senior Managing Director and member of the Executive Committee of Compass Lexecon, an economic consulting firm. I am a Fellow at the University of Southern California's Center for Communication Law & Policy and a Senior Fellow at the Center for American Progress. I received a M.Sc. from Oxford University, which I attended as a Marshall Scholar. I graduated *summa cum laude* in economics from Princeton University. Previously, I served as the Assistant to the U.S. Secretary of Commerce and Director of the Office of Policy and Strategic Planning and as an Economic Policy Advisor on President Clinton's National Economic Council. For my work at the White House, I was presented the Corporation for Enterprise Development's 1999 leadership award for "forging innovative public policies to expand economic opportunity in America." I have provided testimony to administrative agencies, the U.S. Congress, U.S. courts, the European Court of First Instance, and other domestic and foreign regulatory bodies on a range of issues, including competition policy, industry structure, and fiscal policy. I have analyzed and provided economic testimony on a wide variety of telecommunications issues both as part of the government and in the private sector.

Allan Shampine

2. I am a Vice-President of Compass Lexecon. I received a B.S. in Economics and Systems Analysis from Southern Methodist University, *summa cum laude*, and an M.A. and Ph.D. from the University of Chicago. I have been with Compass Lexecon since 1996. I

specialize in applied microeconomic analysis and the economics of telecommunications and payment systems. I am editor of the book Down to the Wire: Studies in the Diffusion and Regulation of Telecommunications Technologies. I have published a variety of articles on telecommunications and network industries in professional economics and legal journals, have provided economic testimony for the Federal Communications Commission ("FCC"), state commissions and the European Commission, and have spoken on telecommunications and network industries in a variety of forums.

B. Overview

3. We have been asked by counsel for the Edison Electric Institute to discuss the economic implications of the FCC's proposed pole attachment rules. We previously submitted a declaration in this proceeding on October 4, 2010 ("Declaration"). In that declaration, we noted that the FCC's focus on "low" rates, rather than "uniform" rates, appears to be misplaced. The Act already provides for uniform rates for competitors, and the FCC's proposal may actually make rates less uniform. Furthermore, the reductions contemplated by the FCC will likely not have any significant effect on broadband deployment because they will mostly affect areas and providers that already have broadband service. However, the FCC's proposal will likely result in a significant subsidy being paid by utility customers, with that subsidy largely going to existing pole attachment owners rather than towards new deployment.

4. In this declaration, we discuss in more detail the likely effects of the FCC's proposal on infrastructure investment incentives. As we noted in our previous declaration, we understand that the framework for the analysis is set forth in Section 224 of the Communications Act. (Appendix 1 of our original Declaration includes the text of that section.) Since the general

structure of the rates is specified by statute, the appropriate economic analysis is to determine how to implement those statutory rates in a manner which maximizes both static and dynamic efficiencies. The initial step, however, is to ensure that any proposed methodology is consistent with the statute itself. Utilities have submitted a variety of evidence on the legislative history of the statute as well as detailed discussions of the terms of the statute to help frame the debate.[1]

5. The FCC's approach, along with those of other commenters, has largely focused on static efficiency, assuming, without analysis or evidence, that dynamic considerations are irrelevant. But the statute discusses dynamic aspects of the pole plant, recognizing that utilities "modify or alter" the plant over time, and the statute's requirement to "apportion the cost" of the pole allows rates to be set in a way that reflects dynamic effects (i.e., changes in the cost of the pole to the utility can affect the utility's incentives for deploying, modifying or altering its pole plant). In this Supplemental Declaration, we explain that the FCC's current proposal does not adequately address dynamic efficiency (i.e., incentives for future infrastructure investment). Furthermore, the FCC justifies its rate reduction proposal by focusing on a "cost causation" approach to rates and by suggesting that pole attachment considerations do not affect utility pole deployment decisions or utility capital costs.[2] Regardless of the merits of such an approach in other contexts, a limited focus only on "cost causation" is, in this case, inconsistent with the

1. See, for example, Comments of the Alliance for Fair Pole Attachment Rules, August 16, 2010, Section III; Comments of the American Public Power Association, August 16, 2010, Section II; Comments of the Florida Investor-Owned Electric Utilities: Florida Power & Light Co., Tampa Electric Co., Progress Energy Florida, Inc., Gulf Power Co., Florida Public Utilities Co., August 16, 2010, Section IV; Comments of the National Rural Electric Cooperative Association, August 16, 2010, pp. 31-32; Oncor Electric Delivery Company LLC's Initial Comments, August 16, 2010, Section XII.
2. FCC, Order and Further Notice of Proposed Rulemaking in the Matter of Implementation of Section 224 of the Act, A National Broadband Plan for our Future, FCC 10-84, May 20, 2010 ("May 2010 FNPRM"), ¶¶ 136-137.

provisions of the Act and with economic principles for maximizing social welfare, with the FCC failing to address the effects of its proposal on utility customers or the owners of other broadband infrastructure.

II. THE FCC'S PROPOSAL DOES NOT ADEQUATELY ADDRESS INCENTIVES FOR FUTURE INFRASTRUCTURE INVESTMENT

6. The FCC proposes reducing rates for all non-ILEC telecommunications pole attachments.[3] Mr. Pecaro and Ms. Kravtin, commenting on behalf of cable companies, propose greater reductions than contemplated by the FCC, and Dr. Pelcovits, on behalf of the NCTA, proposes that pole attachment rental rates be eliminated.[4] More specifically, Mr. Pecaro, Ms. Kravtin and Dr. Pelcovits have proposed setting pole attachment rates at "marginal cost," although they disagree as to precisely what is marginal cost.[5] The FCC has expressed skepticism

3. May 2010 FNPRM, ¶ 141.

4. Declaration of Timothy S. Pecaro, in the Matter of Implementation of Section 224 of the Act, August 16, 2010 ("Pecaro Declaration"), ¶ 6 ("This payment of marginal costs through make-ready and a recurring fee (reflecting the attacher's proportional share of fully allocated costs) allows utilities a recovery that is far in excess of the just compensation appropriate for these economic arrangements."). Report of Patricia D. Kravtin, in the Matter of Implementation of Section 224 of the Act, August 16, 2010 ("Kravtin Declaration"), ¶ 12 ("The marginal cost proxy presented here is a refinement of the Commission's 'no capital cost' telecom formula. This marginal cost proxy applies the underlying economic or analytical theory consistently to all components and inputs of the rate formula, whereas the Commission's proposed formula limits revisions to the capital cost components of the carrying charge factor."). Declaration of Dr. Michael D. Pelcovits, in the Matter of Implementation of Section 224 of the Act; Amendment of the Commission's Rules and Policies Governing Pole Attachments, March 7, 2008 ("Pelcovits Declaration"),¶¶ 6-7 ("The starting point for my analysis … is to compare current rates to long run marginal cost. The reason is that prices in excess of marginal cost will be inefficient. … If space is available, and there are no competing uses for the space, marginal cost is zero. When space can be made available through rearrangement or expansion of a pole's height, the marginal cost is the cost of these measures taken to make the space available.").

5. Pecaro Declaration, ¶ 5 ("Second, in addition to covering a utility's marginal costs through make-ready payments, the cable attacher is required to pay a recurring fee that assures the utility a rate of return plus a recovery of the capital costs of depreciating the pole and the expenses of maintaining, administering, and paying taxes on the pole in proportion to the space used by the cable attachment. To the extent that the cable rate provides utilities with more than their marginal costs associated with an attachment, the attacher is actually defraying costs that utilities and their customers would otherwise bear themselves."). Kravtin Declaration, ¶¶ 12, 58 ("The lower bound telecom rate analysis presented in this report is based on a direct

that the statute allows it to interpret "costs" as "marginal costs," but appears to generally favor defining "costs" in such a way that the portion of the "costs" allocated to attachers is roughly equal to "incremental cost" for the pole owners.[6] Various utilities have filed evidence in this proceeding that such an interpretation is inconsistent with the legislative history and text of the statute.[7] However, even if one assumes that the statute may be interpreted in such a fashion, these approaches all take a short-term view that does not address adequately the effects of their proposals on dynamic efficiency – i.e., incentives for future investment.

7. All of these approaches measure "marginal cost" assuming that poles with excess space available for third-party attachments have been and will be deployed regardless of what attachment requirements and rates are in place.[8] The FCC is very specific in this claim, arguing that "[i]t is likely that most, if not all, of the past investment in an existing pole would have been

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(...continued)

proxy for the economically efficient marginal cost of pole attachment – the cost standard most conducive to achieving the goals set forth in the NBP. … [T]he true marginal or incremental cost of pole attachment is most accurately estimated using the relative-use allocation method embodied in the section 224(d) cable rate…"). Pelcovits Declaration, ¶ 10 ("Since none of these joint and common costs are marginal to the pole attachment, these recurring rates are entirely in excess of marginal cost. Under these circumstances, payment of these recurring rates make the pole owner better off than before, because prior to the licensee attaching to the pole, the pole owner had to recover the entire costs of the pole from its own retail customers.").

6. May 2010 FNPRM, ¶¶ 126, 133.

7. See, for example, Comments of the Alliance for Fair Pole Attachment Rules, August 16, 2010, Section III; Comments of the American Public Power Association, August 16, 2010, Section II; Comments of the Florida Investor-Owned Electric Utilities: Florida Power & Light Co., Tampa Electric Co., Progress Energy Florida, Inc., Gulf Power Co., Florida Public Utilities Co., August 16, 2010, Section IV; Comments of the National Rural Electric Cooperative Association, August 16, 2010, pp. 31-32; Oncor Electric Delivery Company LLC's Initial Comments, August 16, 2010, Section XII.

8. The September 2010 paper by Beard et al. makes a similar assumption, although the authors do note that joint use agreements are not regulated and that as a result changes to the regulated rates "may fail to resolve the efficiency problem of non-uniform prices for broadband firms." T. Randolph Beard, George Ford and Lawrence Spiwak, "The Pricing of Pole Attachments: Implications and Recommendations," 9 Review of Network Economics (2010), p. 16.

incurred regardless of the demand for attachments other than the owner's attachments."[9] None of the parties have discussed in any detail why such an assumption is appropriate, while various utilities have denied the appropriateness of the assumption.[10] Presumably the assumption is largely based on "must serve" regulations imposed by state public service commissions. However, such regulations do not guarantee the availability of space for attachments, only the presence of a pole sufficient to provide electric utility service. Indeed, the FCC itself has noted that "[i]t thus seems more likely that utilities would install poles based on an assessment of their own needs, and, to the extent that future attachments could not be accommodated on such poles, leave it to the new attacher to pay the cost of the new pole, to the extent that one is installed."[11] In fact, we understand that it is very rare for competitive local exchange companies ("CLECs") or cable companies to pay for new poles to be installed. The vast majority of third-party attachments are made to poles where space was already available.

8. The question then is why those poles had space available if utilities are installing poles solely based on their own needs. Generally, such availability appears to be due to "joint use" agreements in which ILECs and electric utilities have shared the costs of installing pole plant which can accommodate both of their needs. Historically, utilities and ILECs observed that

9. May 2010 FNPRM, ¶ 135.

10. See, for example, Comments of the American Public Power Association, August 16, 2010, Section II.B.2. – The Commission's assumption that pole owners install poles only for their own purposes is incorrect as to members of APPA, and p. 15 ("Members of APPA also uniformly confirm that, in making their purchasing decisions for new poles, their specifications include poles of a larger size and class than they would otherwise require in accommodating their own needs. Rather, in every case, they consider the anticipated and potential uses of the poles by multiple third-party communications providers. … Indeed, some of APPA's members order their poles with pre-drilled bolt holes in the communications space in order to accommodate third-party communications attachments.").

11. May 2010 FNPRM, note 365.

they were both installing pole plant and, rather than duplicate one another's plant, signed contracts for "joint use" of each firm's poles. These contracts provide for payments between the firms based on the relative number of poles owned and maintained by each firm. Today, many ILECs appear to have made business decisions that it is more efficient for them to rely upon utilities to install and maintain poles than for the ILECs to do so. We understand that this has resulted in the majority of pole plant being owned by utilities as ILECs pay the utilities to install and maintain poles with sufficient space for ILEC attachments rather than ILECs installing poles of their own.

9. Joint use contracts typically require that poles be installed of sufficient height to accommodate both parties. In addition, joint use contracts typically require that if the other party later wishes to attach, and the pole lacks sufficient room, then the owner must install a new pole primarily at the owner's expense. Utilities therefore have an incentive to install poles with sufficient space to accommodate the ILECs' current and expected attachment needs. Pole heights are standardized in five foot increments such that installing a pole with adequate space for ILEC use may leave space available for third-party attachments. In addition, we understand that poles with extra space are often installed by utilities in anticipation that space will be required for third-party attachers in order to avoid the operational disruptions and expense associated with replacing a pole. Thus, the FCC's assumption that space for attachments would have been present regardless of demand from other firms is incorrect. Space for attachments is available today <u>because</u> of demand from other firms.

10. Joint use agreements and operational conveniences appear, therefore, to be largely responsible for the availability of space for third-party attachments. Such a conclusion suggests

that the FCC's assumption that future investment in poles will continue to make such space available may be misplaced. It is axiomatic in economics that incentives matter for investment. Indeed, such concerns form the standard basis for intellectual property protections. If the government were to take a patented product and give it away at cost, consumers would benefit in the short run because they could get the product for less money. In the long run, however, there would be fewer inventions because the rewards for inventing would be lower.[12] Dr. Pelcovits notes the importance of such financial incentives to investment in his declaration, but applies it only to broadband providers and not utilities.[13] In fact, the importance of financial incentives to utility investment has been well documented in the academic literature. Studies have repeatedly found that opportunistic regulation – i.e., reducing or eliminating compensation mid-stream – results in underinvestment.[14] Similarly, reducing compensation for this input into broadband

12. See, for example, Dennis Carlton and Jeffrey Perloff, Modern Industrial Organization (4th edition, Pearson Addison-Wesley, 2005), p. 531 ("Why would anyone be willing to incur the entire expense of developing new information, processes, or products if people could benefit from them for free?").

13. Pelcovits Declaration, ¶ 26 ("Prior to incurring a fixed cost, a firm will consider whether the cost can be recovered from the increased marginal profit earned as a result of the activity supported by that fixed cost expenditure. If the margin earned is insufficient, the firm will not expend the fixed cost, but will exit or cut-back its activities in the line of business that relies on the fixed cost item.").

14. Paul Joskow, "Regulatory failure, regulatory reform, and structural change in the electrical power industry," Brookings Papers: Microeconomics 1989, 125-208, at 161 ("Utility behavior has naturally responded to the incentives created by the experience of the post-1973 period. Utilities learned that if they built large new generating plants, they might very well not recover their investment… As a result, the expected return on investments in new generating plants subject to regulation is perceived to be below the cost of capital. Few utilities appear willing to build large base-load facilities, even in areas where additional capacity is needed."). Thomas Lyon and John Mayo, "Regulatory opportunism and investment behavior: evidence from the U.S. electric utility industry," 36 RAND Journal of Economics 3 (2005): 628-644, at 629 ("Our results indicate that a utility that suffers a regulatory cost disallowance does subsequently invest less."). Yossef Spiegel, "The choice of technology and capital structure under rate regulation," 15 International Journal of Industrial Organization 1996, 191-216 at 193 ("When investment involves sunk cost, regulatory opportunism has been shown in the literature to induce firms to underinvest, e.g., Spulber (1989, ch. 20) and Besanko and Spulber (1992). This paper shows that besides leading to underinvestment, regulatory opportunism may also distort the firm's choice of technology."). Thomas Lyon, "Regulatory hindsight review and innovation by electric utilities," 7 Journal of Regulatory Economics 1995, 233-254, at 234, ("The key result is that the threat of hindsight review may indeed cause underinvestment or a total

networks may well harm broadband deployment in the long run by discouraging investment in this and other network inputs.[15]

11. As noted above, the various proposals for reducing or eliminating pole attachment rental rates assume that a pole is already present and has sufficient room for third-party attachments. But the focus of this proceeding is on future investment in infrastructure, which can be affected by how firms are compensated for their past investments in infrastructure. Pole plant is neither ubiquitous nor static. New poles are installed and old poles are replaced. Today, those poles have room for attachments, in large part, because of the joint use agreements. Third parties are now arguing that since ILECs and utilities entered into joint use agreements, leading to taller poles which could accommodate both the ILEC and the utility, the third parties should be allowed to attach as well at no charge and provide services competing with the ILECs. This is not the level playing field that the FCC advocates. Furthermore, joint use contracts can be renegotiated, and firms can typically opt out of them with one's year notice, "capping" the existing investment. Reducing or eliminating pole attachment rates will provide incentives for joint use agreements to be renegotiated or eliminated. Future contracts might, for example, call

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(...continued)

refusal to invest in new capacity; in addition, it may cause a utility to switch from an innovative technology to a more costly conventional one.") and 237 ("Recent theoretical analyses by Gilbert and Newberry (1988), Lyon (1991), and Teisberg (1993) all support the idea that 'hindsight review' may reduce investment."). Kai-Uwe Kuhn, "Technology choice and capital structure under rate regulation: a comment," 20 International Journal of Industrial Organization 2002, 269-278, at 269 ("Regulatory opportunism may induce both the choice of inefficiently high fixed cost and inefficiently high marginal cost technologies.").

15. It should also be noted that if utilities were, for example, required by regulation to install poles in particular locations and of particular heights to accommodate third-party attachers, then there would be no question that such regulations were directly impacting both the quantity and type of utility infrastructure to favor such attachers, and the basis for the FCC's proposed methodology would clearly not hold in such a situation.

for poles to be installed with only the minimal room required by the utility, requiring other firms to pay for replacement poles necessary to accommodate their facilities. This would result in inefficient and unnecessary expenses by third parties. Providing appropriate incentives for pole owners to install taller poles to begin with would be more economically efficient.

12. The outcome of this proceeding may influence other broadband input providers as well. The FCC is currently considering the regulation of other inputs into broadband networks, such as copper, coaxial cable, and fiber lines. Firms have collectively spent many billions of dollars on deploying such infrastructure, and are continuing to spend substantial amounts.[16] If the FCC increases the ability of third parties to free ride on other firms' investments in infrastructure, providers of other inputs will reasonably ask whether they are next and whether it is wise for them to continue to invest so heavily in such technologies. A precedent here may thus discourage, on the margin, future investment not just by utilities and ILECs, but by all firms that may be considering deploying access infrastructure.

16. See Robert Atkinson and Ivy Schultz, "Broadband in America," November 11, 2009, § 1.4 – Expected Capital Outlays, and § 2 – Review of Publicly Announced Broadband Plans.

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To: The Commission

REPORT OF

KAUSTUV CHAKRABARTI

Dated: December 14, 2010

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I. INTRODUCTION

A. Qualifications

1. I am a Manager at FTI Consulting in the Washington, DC, office of the Economic Consulting – Network Industries Strategies practice. I received a Bachelor of Science in Chemistry and Economics from the College of William and Mary and a Master of Arts in Applied Economics from the Johns Hopkins University and am a Level III candidate for the Chartered Financial Analyst (CFA) designation.

I joined FTI Consulting in 2008, during which time I have focused primarily on economic and financial analyses within the telecommunications, transportation, and energy industries. Such work has included the estimation and modeling of revenues, capital investment, operating expenses, and marginal costs; analysis of operational and pricing data; financial valuation; and regulatory analysis.

From 2003 to 2008 I worked in the Economic and Business Analysis group at Booz Allen Hamilton, where I often advised Federal government clients with investment and pricing decisions supported by various business case analyses and other cost-related studies. Subject areas included voice communications, information technology, consular services, and maritime regulations. I also delivered training in cost estimating and modeling and capital budgeting.

From 1999 to 2003 I was in the Public Sector group at KPMG LLP (this group split off into KPMG Consulting in 2001 and was renamed BearingPoint in 2002). During this time I estimated the economic damages due to contract disruption and related issues on a terminated weapons contract.

From 1998 to 1999 I worked at McNeil Technologies, where I applied statistical analysis on survey results as part of an effort to identify drivers affecting workplace satisfaction at

national research laboratories. Other work included the modeling of potential solar energy regulation impacts and the design and development of capital spending databases.

2. A copy of my curriculum vitae is attached to this Report.

B. Overview

3. This report supplements the declaration that Mr. Jonathan Orszag and Dr. Allan Shampine[1] filed on request by counsel for the Edison Electric Institute. In that declaration, they discuss the economic implications of the FCC's proposed pole attachment rules. The following is a summary of their principal arguments. Lowering pole attachment rental rates as proposed by the Commission can in the long-run reduce or eliminate the incentives that have led to the creation of pole space available for third-party communications (non-ILEC) attachments. Setting these rental rates "as low and close to uniform as possible"[2] is also likely to be inefficient, distortionary, and counterproductive. The untargeted subsidies that the proposed approach creates would lead to pole owner customers subsidizing other broadband service providers with minimal or possibly adverse impact on broadband deployment. An arbitrary lowering of price inputs generally distorts an industry's evolution and discourages the development of competing inputs, such as wireless connections. The Orszag/Shampine Declaration refutes Dr. Pelcovits's claim that higher pole attachment fees would harm the broadband industry, citing a study performed for the FCC that projects wireline broadband service availability for 95 percent of U.S. homes by 2013-14, as well as pointing out the modest level of attachment rental fees vis-à-vis the other expenses in deploying and operating a broadband network. Further, the proposed

[1] Declaration of Jonathan Orszag and Allan Shampine ("Orszag/Shampine Declaration")
[2] May 2010 FNPRM, ¶1.

methodologies, whose focus is on "cost causation," are inconsistent with economic principles for maximizing social welfare and with provisions of the Pole Attachment Act ("Act").

4. This report continues the discussion but at a more granular level, beginning with the apportionment of pole space under the existing rental rate formulae, which do not follow a cost-sharing approach that considers a pole's full capital costs and operating expenses. The resulting subsidy is not alleviated through the reimbursement of the costs associated with make-ready work. Moreover, because the purpose of make-ready work is only to increase pole capacity, make-ready charges do not compensate electric utilities for the recurring costs incurred due to the presence of the attachment. The report also addresses the adjustments proposed by Ms. Kravtin to the carrying charge elements and rebuttable presumptions in the Telecom Rate.

II. THE CURRENT RATE FORMULAE FAIL TO EQUITABLY APPORTION ACROSS ATTACHERS THE FULL CAPITAL COSTS AND OPERATING EXPENSES OF THE SHARED POLES

A. Section 224 of the Telecommunications Act recognizes the importance of sharing capital costs and operating expenses for the entire pole

5. In the May 2010 Notice of Proposed Rulemaking (NPRM), the Federal Communications Commission (FCC) invited comments regarding proposed changes to the pole attachment Telecom Rate, for which the Commission would institute a "zone of reasonableness" bounded on the upper end by the existing Telecom Rate and on the lower end by the higher of a) an incremental cost-based rate or b) the existing Cable Rate.

6. Section 224 of the Telecommunications Act recognizes that attachers must share the "sum of the operating expenses and actual capital costs of the utility attributable to the entire pole, duct, conduit, or right-of-way."[3] This cost-sharing concept, when applied correctly, forces entities benefitting from the pole to share in the costs equitably. The Act does not envision

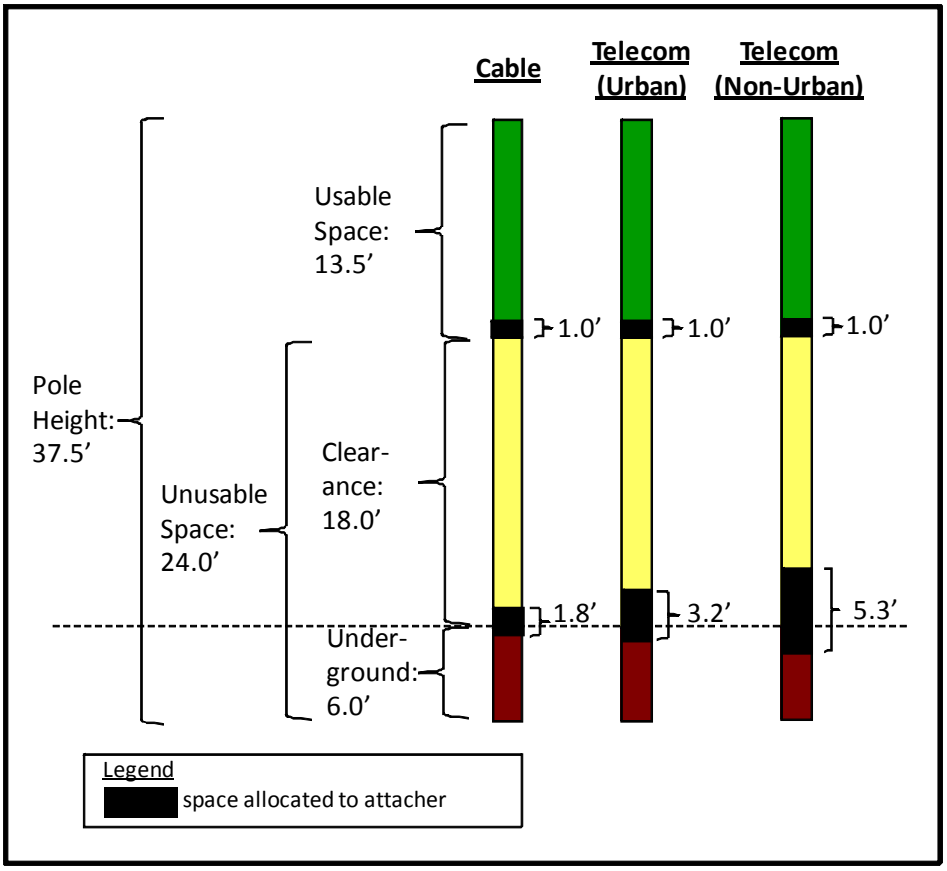
[3] 47 U.S.C. 224(d)(1)

distortionary cross-subsidies. That electric utilities have invested substantial time and resources into developing this pole infrastructure is evidenced by FERC Form 1 financial data. Electric utilities should not bear a disproportionate share of pole costs relative to the other attaching entities that also benefit from the poles for their own business purposes.

B. Neither the existing Cable Rate nor Telecom Rate equitably apportions pole costs to attachers

7. In the NPRM, the Commission refers to the existing Telecom Rate as founded on a fully-distributed cost methodology.[4] However, neither the existing Cable Rate nor Telecom Rate equitably distributes pole costs.

Figure 1: Space Allocated to Attacher Under Existing Rental Formulae



[4] May 2010 FNPRM, ¶132.

8. As illustrated in Figure 1, the Cable Rate formula assumes that each third-party attachment occupies one foot of pole space. Presuming 13.5 feet of usable space on a 37.5-foot pole, the formula allocates 7.4% (1 ÷ 13.5) of a pole's estimated capital and operating expenses to that third-party attachment. The Commission created the 37.5-foot pole height presumption taking the midpoint of 35 and 40 feet, two common pole heights. The formula thereby assigns 7.4%, or 2.8 feet, of the total 37.5 feet to the attachment. The Telecom Rate assigns the same 7.4% of usable space. However, it deviates from the Cable Rate in its allocation of the presumed 24 feet of unusable space. Rather than allocating the same 7.4% of this unusable space to the attachment, the Telecom Rate equally apportions two-thirds of the space across a presumed 5.0 attachers in urbanized areas and across a presumed 3.0 attachers in non-urbanized areas.[5] The formula apportions the remaining one-third of the unusable space to the electric utility.

9. Under the Telecom Rate formula, a third-party attacher pays only 13.3% (five attachers) or 22.2% (three attachers) of costs associated with the unusable space on a pole as detailed in Figure 2, far less than its equitable share under the reality that all entities benefit equally from the 24 feet of unusable (or "common") space on the pole that is necessary to plant the pole six feet in the ground and to raise everyone's attachment at least 18 feet in the air.

[5] As shown later, these presumptions are high. Data produced by utilities indicate that the average –across both urbanized and non-urbanized areas – is closer to 3.0.

Figure 2: Pole Space Apportionment Under Existing Attachment Rate Formulas

	# Attachers	Usable (ft.)	Unusable (ft.)	Total (ft.)
Pole Profile		13.5	24.0	37.5
Apportionment of Pole Space				
Cable Rate		1.0	24*(1/13.5)=1.8	1.0+1.8=2.8
% of Space Apportioned		**7.4%**	**7.4%**	**7.4%**
Telecom Rate (Non-Urbanized)	3.0	1.0	(24*2/3)/3=5.3	1.0+5.3=6.3
% of Space Apportioned		**7.4%**	**22.2%**	**16.9%**
Telecom Rate (Urbanized)	5.0	1.0	(24*2/3)/5=3.2	1.0+3.2=4.2
% of Space Apportioned		**7.4%**	**13.3%**	**11.2%**

C. Utility engineering data facilitate a better understanding of equitable cost apportionment

10. Engineering specifications produced by utilities help to illustrate scenarios for determining a better apportionment of pole costs. The following two scenarios employ the Commission's presumptions regarding pole height and spacing but vary the treatment of the communications worker safety space assumption between electric utility-occupied space (the existing presumption) and unusable space, as argued in EEI reply comments for this proceeding. Each scenario assigns to an attachment the usable space it typically occupies on the pole and equally distributes the remaining space.

Figure 3: 37.5-foot Pole, Electric Utility Safety Space

		Used						Unused		Attachers' Share 5/		
Attach-ments	Pole Height 1/	Electric 2/	ILEC	Att. A	Att. B	Att. C	Total Used	Unused 3/	Attacher Share of Unused 4/	Att. A	Att. B	Att. C
3	37.5	8.7	3.0	1.0			12.7	24.8	8.3	9.3		
4	40.0	8.7	3.0	1.0	1.0		13.7	26.3	6.6	7.6	7.6	
5	40.0	8.7	3.0	1.0	1.0	1.0	14.7	25.3	5.1	6.1	6.1	6.1

		Used						Unused		Attachers' Share		
Attach-ments	Pole Height	Electric	ILEC	Att. A	Att. B	Att. C	Total Used	Unused	Attacher Share of Unused	Att. A	Att. B	Att. C
3	37.5	23%	8%	3%			34%	66%	22%	25%		
4	40.0	22%	8%	3%	3%		34%	66%	16%	19%	19%	
5	40.0	22%	8%	3%	3%	3%	37%	63%	13%	15%	15%	15%

* values in first table (other than first column) shown in feet; those in second table shown as % of pole height
1/ More than 13.5' of usable space is required when >= 4 attachments, requiring 40' pole
2/ 5.33' for electric utility attachments plus 3.33' for safety space
3/ Pole height minus space used
4/ Unused space divided by number of attachments
5/ Space used by attachment plus share of unused space

11. The rightmost section of each table assigns pole space based on a cost-sharing approach that considers the full capital costs and operating expenses for the pole.[6] These assignments are higher than the space assigned to a third-party attachment by the Cable Rate formula (2.8'), by the Telecom Rate formula in non-urbanized areas (6.3'), and by the Telecom Rate formula in urbanized areas (4.2'),[7] as was presented in Figure 1. The tables also convey the capacity issues that exist. Only in the scenario where there is one third-party attacher (1st row) does sufficient usable space exist on the hypothetical 37.5-foot pole – *i.e.*, 12.7' of the 13.5' of usable space is occupied (Total Used column). The illustration highlights the capacity issues that can exist on poles, which may help explain why the number of attaching entities in the real-world is lower than the presumptions the Commission established for the rental formulae.

12. The Commission treats the 40-inch communication worker safety space required by the National Electrical Safety Code (NESC) and that electric utilities set aside to protect attachers' workers (and that the NESC describes as the "communication worker safety zone") as usable space occupied by the electric utility. The scenario presented in the following figure continues to use the FCC presumptions but instead of treating the safety space as occupied by the

[6] The analysis is based on the space occupied by attachments and not on the number of attachers as in the Telecom Rate formula. That formula overweights the electric utility by allocating 1/3 of a pole's unusable space to only the electric utility, in addition to equally apportioning the remaining 2/3 of the unusable space across attachers.
[7] These space allocations are based on a 37.5' pole whereas the last two rows in the table use a 40' pole.

electric utility, it treats this safety space as unusable space. Utilities have continually argued for the assignment of this space to the communications attacher because it is the presence of communications attachments that necessitates this space - the utilities' employees are certified to work in this space. In other words, if it were not for the presence of non-electric attachments on the pole, electric utilities would not be required to provide a 40-inch safety space at all. As such, from an equitable allocation perspective, the presence of non-electric attachments leads to the setting aside of the 40-inch safety zone, and the costs of this space should be recovered through those attachers. The scenario below spreads the 3.3 feet of safety space across all attachments. The under-allocation of pole space to attachers shown earlier is exacerbated when more appropriately classifying the safety space as unusable space.

Figure 4: 37.5-foot Pole, Unusable Safety Space

		Used						Unused		Attachers' Share		
Attach-ments	Pole Height 1/	Electric 2/	ILEC	Att. A	Att. B	Att. C	Total Used	Unused 3/	Attacher Share of Unused 4/	Att. A	Att. B	Att. C
3	37.5	5.3	3.0	1.0			9.3	28.2	9.4	10.4		
4	40.0	5.3	3.0	1.0	1.0		10.3	29.7	7.4	8.4	8.4	
5	40.0	5.3	3.0	1.0	1.0	1.0	11.3	28.7	5.7	6.7	6.7	6.7

		Used						Unused		Attachers' Share		
Attach-ments	Pole Height	Electric	ILEC	Att. A	Att. B	Att. C	Total Used	Unused	Attacher Share of Unused	Att. A	Att. B	Att. C
3	37.5	14%	8%	3%			25%	75%	25%	28%		
4	40.0	13%	8%	3%	3%		26%	74%	19%	21%	21%	
5	40.0	13%	8%	3%	3%	3%	28%	72%	14%	17%	17%	17%

* values in first table (other than first column) shown in feet; those in second table shown as % of pole height

1/ More than 13.5' of usable space is required when >= 4 attachments, requiring 40' pole

2/ 5.33' for electric utility attachments

3/ Pole height minus space used

4/ Unused space divided by number of attachments

5/ Space used by attachment plus share of unused space

13. These scenarios illustrate the subsidies – the under-allocation of pole space to attachers - inherent in the existing rental formulae. As explained in the Orszag/Shampine Declaration, the distortionary effects of low pole attachment rental rates can reduce pole owner incentives, distort industry evolution, discourage competing price inputs, and ultimately have minimal or adverse impact on broadband deployment.

III. MAKE-READY CHARGES COMPENSATE UTILITIES FOR ONLY A SMALL PORTION OF CAPITAL COSTS AND OPERATING EXPENSES

14. Attachers pay electric utilities for the cost, when they exist, to increase the capacity on an existing pole space for an additional attachment. In some cases, this involves rearrangement of facilities on the existing pole. In other, rare cases, make-ready work involves replacing the existing pole with a taller pole.

15. Utilities confirm that it is uncommon for an attacher to ultimately request a new pole. Because an attacher is a profit-seeking entity, the replacement cost may force the attacher to "go underground." The detailed data provided by Oncor below, showing the frequency of make-ready (MR) work during the 2008-2009 timeframe, reflects that attachers requested access to 27,876 poles (poles permitted) in 2008. Of these poles, only 240 (0.9%) were replaced at the attacher's expense through make-ready. Further, the majority of the cost is for the labor rather than the pole itself.

16. These data indicate that make-ready work charges do not compensate the pole owner for anywhere near the marginal costs incurred due to the presence of the attachment on the pole and contribute only a negligible amount to the overall capital costs for joint use poles.

Figure 5: Oncor Make-Ready Data

	2008	2009
All Make Ready (Rearrangement or Change-Out)		
Poles Permitted	27,876	18,042
Poles Requiring Make-Ready of Any Kind	12,016	10,838
% of Poles Permitted	43%	60%
Change-Outs Only		
Change Out of Pole	141	34
Addition of Midspan Pole	99	49
Total	240	83
% of Poles Permitted	0.9%	0.5%

17. Make-ready work to rearrange facilities is more common than is that to change out a pole, however, the charges associated with rearranging existing facilities only compensates the electric utility for increasing the capacity on the pole to accommodate the attacher. They do not compensate the electric utility for the additional, "but for" costs it incurs annually due to the presence of the attachment. Utilities with whom we spoke listed numerous examples of recurring costs that are incurred due to the presence of attachments, some of which are the following:

- Joint use personnel management of third-party attachments
- Systems development and maintenance related to accounting and finance, work management, recordkeeping, and notifications
- Safety inspections and compliance with regulations
- Risk management, including the purchase of insurance and liabilities
- Removal of attachment facilities for out-of-business attaching entities
- Legal counsel for regulatory issues, contract negotiation, and claims

- Construction of taller pole distribution systems ahead of time to avoid future disruption to business by attachers seeking space
- Additional efforts during service restoration such as damaged pole replacements or restoring service due to downed facilities over a roadway

18. Contrary to claims that the only relevant costs are for pole decay and billing functions, these examples indicate that utilities do indeed incur material amounts of maintenance and administrative costs solely due to the presence of third-party attachments.[8]

IV. PROPOSALS TO REDUCE CARRYING CHARGE ELEMENTS IN THE TELECOM RATE EXACERBATE THE INHERENT SUBSIDY

19. The Commission, in its May 2010 NPRM, proposes to establish a Telecom Rate "zone of reasonableness" bounded on the upper-end by the current Telecom Rate and on the lower-end by the greater of a) a rate reflecting incremental cost or b) the Cable Rate. As part of its proposal, the Commission seeks comment on eliminating from the Telecom Rate formula certain capital costs; namely depreciation, taxes, and rate of return. As this report has explained, the current Cable Rate and Telecom Rate force utilities to subsidize the costs of communications attachments through under-apportionment of pole space - and thereby capital costs and operating expenses "attributable to the entire pole, duct, conduit, or right-of-way" – to attachers. The Commission's proposal to reduce or eliminate the carrying charge elements of those rates therefore increases an already unjustified subsidy. As explained in the Orszag/Shampine

[8] Declaration of Timothy S. Pecaro, ¶25-26.

Declaration, this approach can distort incentives while minimally impacting or even hindering broadband deployment.

A. The proposal to downward-adjust the maintenance element of the formula based on ARMIS data distorts the estimation of maintenance expenses

20. The rental formula calculates pole maintenance costs by multiplying bare pole investment by a percentage known as the maintenance element. The Commission adopted FERC accounts to calculate the maintenance element for utilities as presented in Figure 6.[9]

Figure 6: Maintenance Element Calculation in Existing Rental Formulae

$$\text{Maintenance Element} = \frac{\text{Account 593 (Maintenance of Overhead Lines)}}{\text{Investment in Accounts 364 (Poles, Towers, and Fixtures), 365 (Overhead Conductors and Devices), \& 369 (Services)} - \text{Depreciation Related to Accounts 364, 365, \& 369} - \text{Accumulated Deferred Income Taxes Related to Accounts 364, 365, \& 369}}$$

21. The Commission has stated that the maintenance expenses used in the numerator "are not designed to be all inclusive nor are they intended to exclude all non-pole related expenses in the interest of simplicity."[10] The Commission has already denied utilities' requests to include several other accounts such as Account 590 (Maintenance Supervision and Engineering)[11] in this numerator.

22. In her report, [12] Ms. Patricia Kravtin argues that the utilities' maintenance costs are, on average, 40% to 45% of that estimated by the rental formula, due to the inclusion of non-

[9] April 2000 Report and Order, ¶57.
[10] April 2000 Report and Order, ¶59.
[11] May 2001 Consolidated Partial Order on Reconsideration, ¶119. Other excluded accounts include 580 (Operation and Supervision), 583 (Overhead Line Expenses (Major Only), 584 (Underground Line Expenses (Major Only), 588 (Miscellaneous Distribution Operation Expenses), and 598 (Maintenance of Miscellaneous Distribution Plant).
[12] Report of Patricia D. Kravtin, ¶32.

pole maintenance expenses in the rental formula. She also argues that these non-pole items have a higher per-unit maintenance cost than do poles, inflating the maintenance element percentage. As evidence, Ms. Kravtin asserts that the maintenance to gross investment ratio for ILECs, using the Automated Reporting Management Information System (ARMIS) accounts, is lower than the same ratio for electric utilities, using the Federal Energy Regulatory Commission (FERC) accounts. She performs this analysis for a few utility-ILEC pairs, using data mostly for 2006.[13]

23. Ms. Kravtin clearly takes issue with using the FERC data that utilities produce specific to and reflective of their own business operations. She presents no evidence, however, indicating the utilities' data is incorrect or that they do not incur the costs made a part of the current FCC rental formula. Rather, her analysis assumes that ILECs expend as much to maintain their bare pole plant as do electric utilities.

24. The record in this proceeding, however, casts considerable doubt on this assumption, since utilities complain that ILECs spend considerably less on joint use activities, including pole maintenance, than do electric utilities. In fact, utilities with whom we spoke indicated that it was not uncommon to see ILECs decreasing their involvement in pole management, sourcing these activities to electric utilities in some cases. Therefore, the expenses reported by ILECS in ARMIS may not reflect that for a sufficient level of pole maintenance. Furthermore, the comparison attempts to account for all the variables that may affect maintenance costs by pairing an ILEC with an electric utility simply based on the state in which they do business, assuming that other variables such as terrain, density, etc., do not play a meaningful role.

25. Finally, the comparison settles on a maintenance-to-*gross* investment ratio rather than some other ratio, for instance maintenance-to-*net* investment. Even if some maintenance-

[13] One data point is from 2004, and another is an average from 2005 and 2007.

to- investment ratio were appropriate, net investment may be a better choice than gross investment. For one, the Commission prefers the use of net investment in the rental formula when possible. The Commission allowed the use of gross investment in instances where an ILEC's super-depreciation resulted in a negative net investment value.[14] However, the Commission still concluded: "We reiterate that in all other cases, where the net pole investment is positive, the appropriate figures to use in the formula continue to be net figures, unless the parties agree otherwise."[15] In fact, all utilities with whom we spoke used net investment in their calculations.

26. Net investment is also appropriate since it reflects a change in asset value over time whereas gross investment reflects the original cost and therefore does not reflect issues such as differences in the average age of poles (in this case, between ILECs and electric utilities) that may exist. By better approximating current value, net investment also matches up better with the current-year maintenance expenses that are being used in the rental formula. Therefore, even if it were appropriate to compare the maintenance-to-investment ratio of electric utilities to the maintenance-to-investment ratio of ILECs (which it is not, as described earlier), using net investment may be more appropriate.

27. The following table summarizes the calculation of maintenance to net investment for the same set of utilities used in Ms. Kravtin's analysis, but expands the comparison to 2005-07,[16] as shown in Figure 7.

[14] The use of gross or net investment typically does not affect the maintenance element because the choice affects both the numerator and denominator of the maintenance element. Assuming the same rate of accumulated depreciation and deferred taxes for numerator and denominator, both the net investment ratio is the same as the gross investment ratio.
[15] May 2001 Consolidated Partial Order on Reconsideration, ¶42.
[16] GTE Florida's net investment was zero and was therefore excluded from the final results.

Figure 7: Maintenance to Investment Ratios, 2005-07

dollars in thousands

		2005-07		2007					2006					2005				
	Utility/ILEC	% Gross	% Net	Maint.	Gross Inv.	% Gross	Net Inv.	% (Net)	Maint.	Gross Inv.	% Gross	Net Inv.	% Net	Maint.	Gross Inv.	% Gross	Net Inv.	% Net
1	Alabama Power	5.23%	10.24%	108,112	2,029,734	5.33%	1,046,864	10.33%	96,868	1,933,893	5.01%	994,348	9.74%	98,247	1,831,048	5.37%	923,601	10.64%
2	BellSouth - Alabama	1.05%	2.96%	1,739	180,095	0.97%	63,582	2.74%	1,946	174,705	1.11%	63,275	3.08%	1,778	167,974	1.06%	58,087	3.06%
3	**ILEC/Utility Ratio**	**0.20**	**0.29**			**0.18**		**0.26**			**0.22**		**0.32**			**0.20**		**0.29**
4	Georgia Power	3.24%	6.62%	78,312	2,477,641	3.16%	1,235,326	6.34%	78,371	2,378,991	3.29%	1,159,933	6.76%	69,544	2,131,112	3.26%	1,026,402	6.78%
5	BellSouth - Georgia	0.71%	3.10%	1,205	167,906	0.72%	35,301	3.41%	1,509	163,915	0.92%	38,372	3.93%	798	159,538	0.50%	40,904	1.95%
6	**ILEC/Utility Ratio**	**0.22**	**0.47**			**0.23**		**0.54**			**0.28**		**0.58**			**0.15**		**0.29**
7	Mississippi Power	3.74%	7.92%	5,085	251,894	2.02%	131,229	3.87%	7,747	239,495	3.23%	121,376	6.38%	12,059	202,572	5.95%	89,259	13.51%
8	BellSouth - Mississippi	1.80%	11.19%	606	102,626	0.59%	14,821	4.09%	2,738	102,071	2.68%	18,454	14.84%	2,083	97,987	2.13%	14,213	14.66%
9	**ILEC/Utility Ratio**	**0.49**	**1.49**			**0.29**		**1.06**			**0.83**		**2.32**			**0.36**		**1.08**
10	Gulf Power	3.14%	5.93%	10,440	311,682	3.35%	165,969	6.29%	8,126	301,328	2.70%	159,566	5.09%	9,783	289,846	3.38%	152,960	6.40%
11	Florida P&L	3.84%	7.51%	111,810	2,660,562	4.20%	1,347,752	8.30%	104,138	2,550,083	4.08%	1,324,840	7.86%	78,413	2,421,845	3.24%	1,227,986	6.39%
12	BellSouth - Florida	2.27%	11.46%	3,971	194,162	2.05%	40,715	9.75%	5,730	186,349	3.07%	42,029	13.63%	2,874	171,396	1.68%	26,125	11.00%
13	GTE Florida	1.68%	-9.12%	551	32,161	1.71%	(5,713)	-9.64%	593	31,504	1.88%	(6,346)	-9.34%	450	31,226	1.44%	(5,368)	-8.38%
14	**ILEC/Utility Ratio**	**0.65**	**1.72**			**0.54**		**1.34**			**0.91**		**2.11**			**0.51**		**1.72**
15	NSTAR/Boston Edison	2.60%	5.17%	20,342	927,242	2.19%	460,443	4.42%	15,745	528,426	2.98%	261,619	6.02%	12,617	481,351	2.62%	248,545	5.08%
16	Verizon Massachusetts	0.62%	2.34%	2,892	415,040	0.70%	119,429	2.42%	2,386	393,102	0.61%	99,755	2.39%	2,122	375,157	0.57%	95,968	2.21%
17	**ILEC/Utility Ratio**	**0.25**	**0.46**			**0.32**		**0.55**			**0.20**		**0.40**			**0.22**		**0.44**
18	Cent. Hudson G&E	4.20%	8.40%	13,505	295,954	4.56%	156,792	8.61%	12,823	281,626	4.55%	146,465	8.76%	9,155	263,513	3.47%	116,785	7.84%
19	Verizon New York	0.66%	5.09%	4,245	673,004	0.63%	97,655	4.35%	3,874	654,542	0.59%	82,986	4.67%	4,887	636,004	0.77%	77,959	6.27%
20	**ILEC/Utility Ratio**	**0.16**	**0.61**			**0.14**		**0.50**			**0.13**		**0.53**			**0.22**		**0.80**
21	Dominion	2.72%	5.46%	73,019	2,438,439	2.99%	1,211,960	6.02%	64,959	2,316,852	2.80%	1,150,399	5.65%	51,440	2,188,480	2.35%	1,092,749	4.71%
22	Verizon Virginia	0.80%	8.08%	646	94,802	0.68%	8,087	7.99%	805	93,287	0.86%	9,187	8.76%	799	91,961	0.87%	10,679	7.48%
23	**ILEC/Utility Ratio**	**0.30**	**1.49**			**0.23**		**1.33**			**0.31**		**1.55**			**0.37**		**1.59**
24	**Avg. ILEC:Utility Ratio**	**0.33**	**0.93**			**0.28**		**0.80**			**0.41**		**1.12**			**0.29**		**0.89**

28. The analysis shows in Row 24 that the comparison for the selected companies is much closer over the three years using net investment than as suggested when using gross investment. In fact, in 2006, the ratio of maintenance to net investment was actually 12% higher for ILECs compared to utilities. In other words, if one were to rely on 2006 only (the year Ms. Kravtin's analysis primarily relies upon) and use the net investment rather than gross investment, the same rationale would lead to an upward adjustment to the maintenance expenses in the rental rate formula. In summary, the proposed adjustment factor lacks merit.

B. Lowering the administrative element percentage is unwarranted and may underestimate a pole's administrative costs.

29. The rental formula estimates administrative costs using an approach similar to that for maintenance costs. The formula calculates an "administrative element" percentage that, like the maintenance element, is multiplied against the utility's average, net bare pole investment cost. The formula uses the plant-wide administrative expenses that a utility reports in FERC accounts 920 through 935 under *Electric Operations and Maintenance Expenses*[17] to determine the administrative element's numerator.

Figure 8: FERC Administrative Expenses Accounts

Line No.	Account	Line No.	Account
179	8. ADMINISTRATIVE AND GENERAL EXPENSES	188	(927) Franchise Requirements
180	Operation	189	(928) Regulatory Commission Expenses
181	(920) Administrative and General Salaries	190	(Less) (929) Duplicate Charges - Credit
182	(921) Office Supplies and Expenses	191	(930.1) General Advertising Expenses
183	(Less) (922) Administrative Expenses Transferred - Credit	192	(930.2) Miscellaneous General Expenses
184	(923) Outside Services Employed	193	(931) Rents
185	(924) Property Insurance	194	TOTAL Operation
186	(925) Injuries and Damages	195	Maintenance
187	(926) Employee Pensions and Benefits	196	(935) Maintenance of General Plant

[17] FERC Form No.1, page 323.

Figure 9: Administrative Element Formula

$$\text{Administrative Element} = \frac{\text{Accounts 920-935 (General and Administrative)}}{\text{Investment in Account 101 (Gross Plant)} - \text{Depreciation Related to Account 101} - \text{Accumulated Deferred Income Taxes Related to Account 101}}$$

30. These administrative expenses are divided by the utility's electric plant investment to obtain the administrative element, which therefore is an estimate of the ratio of administrative expenses to investment for a bare pole based on the ratio of administrative expenses to investment for electric plant. As the record-to-date shows, the Commission has already considered the use of various administrative expense accounts in determining the administrative element.[18]

31. Ms. Kravtin proposes an alternative approach to determine the administrative element, citing language in 47 CFR 64[19] as support for applying an "adjustment factor" to the FERC administristive expense accounts.[20]

47 CFR 64.901(b)(iii)(2)

"When direct analysis is not possible, common cost categories shall be allocated based upon an indirect, cost-causative linkage to another cost category (or group of cost categories) for which a direct assignment or allocation is available."

32. She asserts that application of this adjustment factor to plant-wide administrative expenses leads to the administrative expenses directly attributable to a pole, and that dividing

[18] April 2000 Report and Order, ¶48-50.
[19] Ms. Kravtin does not indicate which section of Part 64, but the language cited is in 64.901(b)(iii)(2)
[20] Report of Patricia D. Kravtin, ¶36.

this new value by the net investment for a bare pole in FERC Account 364 leads to a more accurate, "cost-causative" administrative element. Ms. Kravtin describes this adjustment factor as the "ratio of direct pole expenses (recorded in account 593 'Maintenance of Overhead Lines') to total company direct expenses (sum of utility operations and maintenance accounts 581-598, 901-916)."[21]

Figure 10: Described Adjustment Factor

$$\text{Described Adjustment Factor} = \frac{\text{Accounts 593 (Maintenance of Overhead Lines)}}{\text{Distribution Operations (581-589)} + \text{Distribution Maintenance (590-598)} + \text{Customer Accounts (901-905)} + \text{Customer Service and Informational (907-910)} + \text{Sales (911-916)}}$$

Figure 11: FERC Expense Accounts Used in Adjustment Factor

Line No.	Account	Line No.	Account
132	4. DISTRIBUTION EXPENSES	157	5. CUSTOMER ACCOUNTS EXPENSES
133	Operation	158	Operation
134	(580) Operation Supervision and Engineering	159	(901) Supervision
135	(581) Load Dispatching	160	(902) Meter Reading Expenses
136	(582) Station Expenses	161	(903) Customer Records and Collection Expenses
137	(583) Overhead Line Expenses	162	(904) Uncollectible Accounts
138	(584) Underground Line Expenses	163	(905) Miscellaneous Customer Accounts Expenses
139	(585) Street Lighting and Signal System Expenses	164	TOTAL Customer Accounts Expenses
140	(586) Meter Expenses	165	6. CUSTOMER SERVICE AND INFORMATIONAL EXPENSES
141	(587) Customer Installations Expenses	166	Operation
142	(588) Miscellaneous Expenses	167	(907) Supervision
143	(589) Rents	168	(908) Customer Assistance Expenses
144	TOTAL Operation	169	(909) Informational and Instructional Expenses
145	Maintenance	170	(910) Miscellaneous Customer Service and Informational Expenses
146	(590) Maintenance Supervision and Engineering	171	TOTAL Customer Service and Information Expenses
147	(591) Maintenance of Structures	172	7. SALES EXPENSES
148	(592) Maintenance of Station Equipment	173	Operation
149	(593) Maintenance of Overhead Lines	174	(911) Supervision
150	(594) Maintenance of Underground Lines	175	912) Demonstrating and Selling Expenses
151	(595) Maintenance of Line Transformers	176	(913) Advertising Expenses
152	(596) Maintenance of Street Lighting and Signal S	177	(916) Miscellaneous Sales Expenses
153	(597) Maintenance of Meters		
154	(598) Maintenance of Miscellaneous Distribution Plant		
155	TOTAL Maintenance		
156	TOTAL Distribution Expenses		

[21] Report of Patricia D. Kravtin, ¶37.

The described adjustment formula differs from the one used in the calculations and leads to a substantial increase in the administrative element.

33. The adjustment that Ms. Kravtin describes significantly increases the administrative element under the current formula. The described adjustment is therefore not likely the one that had been intended by Ms. Kravtin as it actually increases the administrative element significantly (Dominion's increases from 4.4% to 42%) as shown for the set of utilities in Figure 12. Even if the description is as intended, it is not clear that the principle aligns with the cited section of CFR 64, as no evidence is provided that there is a sufficient linkage between the administrative and maintenance expenses for using the latter to estimate the former.

Figure 12: Administrative Element Under Described Approach

	FERC Account	Alabama Power	NSTAR	Central Hudson	FP&L	Georgia Power	Gulf Power	Miss. Power	Dominion
1	(920-935) A&G	300	132	58	341	375	89	67	395
2	Net Electric Plant in Service	7,710	2,215	393	10,437	9,660	1,301	909	8,949
3	**Admin. Element- Current Formula (=1/2)**	**3.9%**	**6.0%**	**14.8%**	**3.3%**	**3.9%**	**6.9%**	**7.4%**	**4.4%**
4	(593) Overhead Line Maintenance	108	20	14	112	78	10	5	73
5	(581-589) Dist. Operations	40	66	13	69	88	11	16	50
6	(590-598) Dist. Maint.	136	39	16	189	157	21	11	119
7	(901-905) Customer Accounts	100	55	15	132	139	22	15	65
8	(907-910) Customer Serv./Inform.	34	60	12	87	44	24	6	2
9	(911-916) Sales	13	3	1	18	46	1	6	
10	Total (5 to 9)	323	223	57	494	474	79	55	236
11	Adjustment Factor (=4/10)	33%	9%	24%	23%	17%	13%	9%	31%
12	Adjusted A&G (=11*1)	100	12	14	77	62	12	6	122
13	(364) Net Pole Investment	458	116	67	415	402	59	52	291
14	**Admin. Element - Proposed Formula (=12/13)**	**22%**	**10%**	**21%**	**19%**	**15%**	**20%**	**12%**	**42%**

* expense and investment values are for 2007, and in Millions

34. The adjustment factor that Ms. Kravtin calculates in Appendix C of her report may be the one that had been intended, although as discussed next, it differs from the one described in the narrative and does not adhere to the "direct" expense concept referred to in that narrative.

The adjustment factor that is used in Appendix C of Ms. Kravtin's report lacks consistency and does not adhere to the so-called "direct" expense concept.

35. The appendix to Ms. Kravtin's report presents the calculation of an adjustment factor for Gulf Power of 1.26%[22] that is multiplied against its reported administrative and general expenses and ultimately divided by net pole investment in Account 364. This adjustment differs from the "cost-causative" factor for which the narrative argues.

Figure 13: Appendix C Adjustment Factor

$$\text{Appendix C Adjustment Factor} = \frac{\text{Accounts 593 (Maintenance of Overhead Lines)}}{\text{Total Electric Operations and Maintenance}}$$

36. As shown in Figure 13, the Appendix C adjustment factor uses the ratio of pole line *maintenance* (Account 593) to plant-wide maintenance *and operations* as, presumably, a proxy of the ratio of pole *administrative* to plant-wide *administrative*. This proxy is used to estimate the administrative expense related to poles. The approach fails conceptually by including all types of non-maintenance expenses in the denominator. To be more consistent, the adjustment factor would be the ratio of overhead line *maintenance* (Account 593) to total plant *maintenance*.

Figure 14: Modification to Adjustment Factor

$$\text{Modified Adjustment Factor} = \frac{\text{Accounts 593 (Maintenance of Overhead Lines)}}{\text{Total Electric Maintenance}}$$

[22] Report of Patricia D. Kravtin, Appendix C, Page 1 of 4, Column 3 (High-End Cost-Causative Fully Allocated Telecom Rate)

37. As shown in Figure 15, this adjustment factor (row 13) would continue as in Ms. Kravtin's analysis to be multiplied by total A&G (row 1) to derive a pole plant-related administrative expense, and then finally divided by net pole plant in Accounts 364, 365, and 369 (row 15). This modified approach leads to an administrative element (row 16) that is usually higher than when using the existing rental formulae (row 3) for the sample set of utilities.

Figure 15: Modification of Appendix C Adjustment Factor

	FERC Account	Alabama Power	NSTAR	Central Hudson	FP&L	Georgia Power	Gulf Power	Miss. Power	Dominion
1	(920-935) A&G	300	132	58	341	375	89	67	395
2	Net Electric Plant in Service	7,710	2,215	393	10,437	9,660	1,301	909	8,949
3	**Admin. Element- Current Formula (=1/2)**	**3.9%**	**6.0%**	**14.8%**	**3.3%**	**3.9%**	**6.9%**	**7.4%**	**4.4%**
4	(593) Overhead Line Maintenance	108	20	14	112	78	10	5	73
5	(510-514) Maintenance - Steam Pwr.	152			85	216	41	36	172
6	(528-532) Maintenance - Nuclear Pwr.	67			164	61			117
7	(541-545) Maintenance - Hydraulic Pwr.	10				9			5
8	(551-554) Maintenance - Other Pwr.	11			36	10	3	20	32
9	(568-573) Maintenance - Transmission	38	6	4	25	65	3	1	20
10	(576.1-576.5) Maintenance - Regional Mkt.								
11	(590-598) Maintenance - Distribution	136	39	16	189	157	21	11	119
12	Total (5 to 11)	414	46	20	499	518	68	68	465
13	Adjustment Factor (=4/12)	26%	45%	66%	22%	15%	15%	7%	16%
14	Adjusted A&G (13*1)	78	59	39	76	57	14	5	62
15	(364, 365, 369) Net Plant Investment	1,047	460	157	1,348	1,235	166	131	1,212
16	**Admin. Element - Alternative (=14/15)**	**7.5%**	**12.8%**	**24.6%**	**5.7%**	**4.6%**	**8.2%**	**3.8%**	**5.1%**

* expense and investment values are for 2007, and in Millions

38. Setting aside the above discussion, it is not clear that the administrative element under the existing formulae must be modified in the first place. As the record has shown and utilities confirmed in our discussions, it is difficult to isolate pole administrative expenses. An adjustment to the administrative element based on maintenance costs, as shown in the table above, should actually lead to an increase in this carrying charge element.

The Full-Time Equivalent (FTE) citation from the Connecticut Power and Light proceeding should not be used to estimate "but for" administrative expenses.

39. A third administrative-related calculation Ms. Kravtin describes or performs is an estimate of the incremental administrative expenses due to the presence of pole attachments.[23] The estimate of five full-time equivalents (FTE) relies on a data request from the Department of Public Utility Control to which Connecticut Light and Power responded. No information regarding the types of activities included in or any assumptions behind the FTE estimate is provided. Therefore, this is an inappropriate estimate for "but for" administrative expenses.

C. The IRS interest charge does not reflect utilities' cost of capital and should not replace the Commission's default rate of 11.25%.

40. The rate of return element compensates utilities for the cost of acquiring the capital necessary[24] to invest in its pole infrastructure and is, therefore, multiplied against the bare pole investment, as are the other carrying charge elements. The rate of return is either set by the state, as confirmed by some utilities with whom we spoke, or set at the Commission's default rate of 11.25%.

47 CFR 65.300 describes the general financial formula for cost of capital, reproduced below in Figure 16.

Figure 16: Weighted Average Cost of Capital

$$\text{Weighted Average Cost of Capital} = w_e(\text{Cost of Equity}) + w_d(\text{Cost of Debt}) + w_p(\text{Cost of Preferred Stock})$$

[23] Report of Patricia D. Kravtin, ¶72
[24] April 2000 Report and Order, ¶74.

41. The formula calculates the cost of a firm to raise capital from its various investors, weighted by the portion of the firm's capital structure each funding source constitutes. The IRS rate fails to reflect these firm-specific and industry-specific factors utility investors incorporate in their expected rate of return, as recognized for other regulated industries. As the Commission stated in the *Matter of Petition of Worldcom*,[25] the cost of capital is the "minimum rate of return required to attract capital to an investment. It is the rate of return investors expect to receive from alternative investments that have the same risk." In this 2003 decision, the Commission used a 12.95% rate of return,[26] much higher than the IRS rate of return of 4.75% for that year cited by Ms. Kravtin in her report.[27] Similarly, the Surface Transportation Board (STB) calculated the 2009 railroad industry cost of capital as 10.43%.[28] Clearly the IRS rate of return is not a universal cost of capital that reflects risk factors, capital structure, and other factors specific to individual firms and industries.

42. In spite of the above, Ms. Kravtin argues for the IRS interest rate, which is generally based on short-term US obligations plus three percent.[29] In doing so, Ms. Kravtin cites refunds "pursuant to pole rate and cable rate regulation." However, as discussed in the matter of *Implementation of the Pay Telephone Reclassification and Compensation Provisions of the Telecommunications Act of 1996*,[30] the Commission allowed the use of the IRS rate when computing interest for refunds on overpayments and to payments flowing bilaterally between two parties, but used the LEC's capital cost of 11.25% where payments would be predominantly flowing to the LEC since its cost of capital was appropriate. Since it is the attacher in the current

[25] Memorandum and Order, CC Docket No. 00-218 and 00-251, ¶¶60.
[26] Memorandum and Order, CC Docket No. 00-218 and 00-251, ¶¶64.
[27] Report of Patricia D. Kravtin, ¶¶43.
[28] Docket No. EP 558 (Sub-No. 13), Railroad Cost of Capital 2009, page 12.
[29] Report of Patricia D. Kravtin, ¶¶42-43.
[30] Fourth Order on Reconsideration and Order of Demand, , ¶¶32-33.

proceeding who rents space from the electric utility, the payments in this are also in one direction - to the electric utility, and it is therefore these utilities' cost of capital that should determine the rate of return. For these reasons the existing 11.25% default rate of return is a more appropriate measure of the cost of capital than is the IRS interest rate.

V. THE COMMISSION'S PRESUMPTIONS REGARDING THE NUMBER OF ATTACHING ENTITIES DO NOT REFLECT REALITY

43. The Telecom Rate presumes rebuttable factors of 5.0 and 3.0 attaching entities to a pole in urbanized and non-urbanized areas, respectively. Utilities with whom we spoke consistently attested their joint use poles *average* 3.0 attaching entities (including the electric utility as an attaching entity), which is supported by pole inventory data summarized in Figure 17. An audit by Ameren on its St. Louis metropolitan area found the average number of attaching entities to be even lower at 2.3.[31] These utilities generally survey 20% of their poles each year as part of a five-year rolling inventory.

Figure 17: Number of Attaching Entities per Joint Use Pole

Pole Height	APS	GA Power	Oncor	Avg.
30'	3.0	2.6	2.6	2.7
35'	3.0	2.6	2.9	2.8
40'	3.8	2.7	2.9	3.1
45'	3.8	2.8	2.8	3.1
Average				**3.0**

44. Ms. Kravtin proposes to average the two current presumptions to arrive at a uniform (but overstated) presumption of 4.0 attaching entities.[32] Notwithstanding the existing Telecom Rate subsidy described in previous sections, the formula should use 3.0 as the

[31] Ameren's data was not broken out by pole height and therefore not shown in the table.
[32] Report of Patricia D. Kravtin, ¶47.

presumption for the number of attaching entities in order to reduce the current under-recovery. The current presumptions of 3.0 in non-urbanized areas and 5.0 in urbanized areas, as well as Ms. Kravtin's proposal of simply taking the average, fail to account for what has actually transpired – two attaching entities other than the electric utility. Not only that, but the Telecom Rate formula should also exclude the electric utility when counting the number of attaching entities, since the 1/3 of the 24 feet of unusable space is allocated completely to the electric utility, before the additional apportionment of the remaining 16 feet of unusable space.

VI. CONCLUSION

45. The existing rental formulae do not follow a cost-sharing approach that considers the full capital costs and operating expenses for a pole. The under-apportionment of pole space to third-party attachers results in a subsidy borne by the electric utility and its customers. This subsidy is not alleviated through make-ready work, whose purpose is to increase capacity and does not cover the recurring, additional maintenance and administrative costs incurred by the electric utility due to the presence of the attachment. Furthermore, the proposed adjustments by Ms. Kravtin to the existing Telecom Rate (that referred to as the Upper Bound Telecom Rate in the May 2010 FNPRM) lack merit and further exacerbate the inherent subsidy. As explained more fully in the Orszag/Shampine Declaration, the lowering of these pole attachment rates is inconsistent with the Act, can reduce or eliminate incentives to expand pole infrastructure, can distort industry development, and would minimally impact (or even hinder) broadband deployment.

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EDUCATION

Johns Hopkins University
Master of Arts. Applied Economics.

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Bachelor of Science. Major: Chemistry. Major: Economics.

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EXPERIENCE

FTI Consulting. Washington, DC. **June 2008 – Present**
Positions Held: Manager

- Conduct economic and financial analysis for clients in the telecommunications, transportation, and energy industries. Analyses include estimating and forecasting capital costs, operating expenses, and inflation; analyzing operational data such as sales volumes and profitability in various market segments; identifying revenue and cost drivers; and identifying impact of potential legislation.

Booz Allen Hamilton. McLean, VA. **Sept. 2003 – June 2008**
Positions Held: Senior Consultant, Associate

- Developed and recommended investment solutions to clients through performance of business case analyses in information technology, voice telephony and VoIP, financial reporting, and construction. Analyses included modeling lifecycle costs, benefits, and risks and identifying various options such as vendor outsourcing, legacy upgrades, etc. Applied proprietary frameworks to rank and compare benefits and risks across various alternatives, working with subject experts in various fields. Worked closely with client to develop and manage capital budgeting process.
- Led development of regulatory impact analysis capability and delivered training on costing modeling, capital budgeting, and regulatory impact analysis.

KPMG Consulting (KPMG spin-off)/BearingPoint. Washington, DC. **Jan 2000 – Sept. 2003**
KPMG LLP. Washington, DC. **April 1999 – Jan 2000**
Positions Held: Senior Analyst, Consultant

- Quantified economic damages resulting from a termination for convenience claim on a terminated weapons program, such as those related to disruption and design changes. Worked with engineers and other subject matter experts to identify causes for engineering modifications and model resulting costs.
- Led implementation of process improvement initiatives on IT project to achieve Level 3 Capability Maturity Model (CMM) certification. Implement processes to improve quality assurance, testing of code, peer reviews, risk management, and other areas.
- Coordinated and helped design electronic commerce parts website for automotive start-up company. Communicated with website hosting vendor, tested electronic data interface capability, and wrote website content.

McNeil Technologies. Springfield, VA. **June 1998 – April 1999**
Positions Held: Analyst

- Identified drivers of employee satisfaction at national laboratories through performance of statistical analyses on survey data. Authored reports and presentations detailing findings and on survey design.
- Designed capital spending databases, which included the designing of data entry forms and output reports, and writing back-end code. Worked with clients to determine user requirements, perform walk-through, etc.