

FILE

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of)
Columbus Southern Power Company and) Case No. 11-351-EL-AIR
Ohio Power Company, Individually and, if) Case No. 11-352-EL-AIR
Their Proposed Merger is Approved, as a)
Merged Company (collectively, AEP Ohio))
for an Increase in Electric Distribution Rates)

In the Matter of the Application of)
Columbus Southern Power Company and) Case No. 11-353-EL-ATA
Ohio Power Company, Individually and, if) Case No. 11-354-EL-ATA
Their Proposed Merger is Approved, as a)
Merged Company (collectively, AEP Ohio))
for Tariff Approval)

In the Matter of the Application of)
Columbus Southern Power Company and) Case No. 11-356-EL-AAM
Ohio Power Company, Individually and, if) Case No. 11-258-EL-AAM
Their Proposed Merger is Approved, as a)
Merged Company (collectively, AEP Ohio))
for Approval to Change Accounting Methods)

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PREFILED DIRECT TESTIMONY OF
PATRICIA KRAVTIN
ON BEHALF OF
OHIO CABLE TELECOMMUNICATIONS ASSOCIATION

October 24, 2011

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1 **INTRODUCTION**

2 ***Q. PLEASE STATE YOUR NAME, POSITION, AND BUSINESS ADDRESS.***

3 A. My name is Patricia D. Kravtin. I am an economist in private practice specializing in the
4 analysis of telecommunications and energy regulation and markets. My business address is 57
5 Phillips Avenue, Swampscott, Massachusetts.

6 **Qualifications**

7 ***Q. PLEASE DESCRIBE YOUR PROFESSIONAL AND EDUCATIONAL***
8 ***BACKGROUND.***

9 A. I received a B.A. with Distinction in Economics from the George Washington University.
10 I studied in the Ph.D. program in Economics under a National Science Foundation Fellowship at
11 the Massachusetts Institute of Technology (M.I.T.). My fields of concentration at M.I.T. were
12 government regulation of industry, industrial organization, and urban and regional economics.
13 My professional background includes a wide range of consulting experiences in regulated
14 industries. Between 1982 and 2000, I was a consultant at the national economic research and
15 consulting firm of Economics and Technology, Inc. (ETI) in that firm's regulatory consulting
16 group, where I held positions of increasing responsibility, including Senior Vice President/Senior
17 Economist. Upon leaving ETI in September 2000, I began my own consulting practice
18 specializing in telecommunications, cable, and energy regulation and markets.

19 I have testified or served as an expert witness on telecommunications matters in proceedings
20 before over thirty state, provincial, and federal regulatory commissions, including the Federal
21 Communications Commission ("FCC"), the Federal Energy Regulatory Commission ("FERC"),
22 and the Canadian Radio-television and Telecommunications Commission ("CRTC"). In

1 addition, I have testified as an expert witness in antitrust litigation before a number of state and
2 federal district courts on matters relating to telecommunications competition, market power, and
3 barriers to entry, and in regard to Section 253 of the Telecommunications Act of 1996 (“the
4 Act”) concerning use of public rights-of-way. I have also testified before a number of state
5 legislative committees and served as advisor to a number of state regulatory agencies.

6 **Q. COULD YOU BRIEFLY DESCRIBE YOUR EXPERIENCE OF PARTICULAR**
7 **RELEVANCE TO THIS PROCEEDING**

8 A. Yes. Over the course of my career, I have been actively involved in a number of state
9 and federal regulatory commission proceedings involving cost methodologies and the allocation
10 of costs of incumbent local exchange carriers (“ILECs”) and electric utilities. One local network
11 component, essential for the provision of competitive communications services, with which I am
12 also very familiar, is access to poles, ducts, conduits, and rights-of-way. I have testified
13 extensively on matters pertaining to these essential facilities before state and federal regulatory
14 agencies and district courts, including those in Florida, New York, California, Washington, and
15 North Carolina.

16 I have submitted reports in pole proceedings before the FCC, including both rounds of its most
17 recent pole rulemaking proceeding, *In the Matter of Implementation of Section 224 of the Act; A*
18 *National Broadband Plan for our Future, Opinion and Further Notice of Proposed Rulemaking,*
19 *WC Docket No. 07-245, GN Docket No. 09-51, rel. May 20, 2010 (FCC 2010 FNRPM) and In*
20 *the Matter of Implementation of Section 224 of the Act; Amendment of the Commission's Rules*
21 *and Policies Governing Pole Attachments, WC Docket No. 07-245, RM 11293, RM 11303, re.*
22 *Nov. 20, 2007 (FCC 2007 NPRM Proceeding).* In 2006, I submitted testimony and was subject
23 to live cross-examination before the FCC’s Chief Administrative Law Judge, on issues

1 pertaining to utility compensation for pole attachments in *In the Matter of Florida Cable*
2 *Telecommunications Association, Inc., et. al. v. Gulf Power Company*, Initial Decision, FCC
3 07D-01, 22 FCC Rcd 1997 (2007) *aff'd, FTCA v. Gulf Power*, FCC 07D-01, 2011 FCC
4 LEXIS 1384 (Apr. 12, 2011) (“*FCTA*”). I also submitted a declaration in the FCC’s earlier
5 pole attachment proceeding, CS Docket No. 97-98. Additionally, I submitted testimony before
6 the FCC in pole attachment complaint proceedings brought against electric utilities Gulf Power
7 and Dominion Virginia Power.

8 I have served as an expert or advisor on pole attachment matters in proceedings involving
9 investor-owned utilities, non-profit consumer-owned utilities, and municipally-owned utilities,
10 and before various state (and provincial) regulatory commissions including this Commission as
11 well as the Kentucky Public Service Commission, the Arkansas Public Service Commission, the
12 Public Utilities Commission of Texas, the Georgia Public Service Commission, the South
13 Carolina Public Service Commission, the Public Service Commission of the District of
14 Columbia, the New Jersey Board of Public Utilities, the New York Public Service Commission,
15 the Virginia Corporation Commission, and the Ontario Energy Board. I have also testified on
16 matters pertaining to access to poles and conduit of incumbent local exchange carriers (“ILECs”)
17 in proceedings before the Georgia Public Service Commission, the South Carolina Public
18 Service Commission, the Public Service Commission of the District of Columbia, and the New
19 York Public Service Commission.

20 I have also been actively involved in related issues pertaining to broadband deployment. I have
21 authored a number of reports dealing with this subject and participated as a grant reviewer for the
22 Broadband Technology Opportunities Program (“BTOP”) administered by National
23 Telecommunications and Information Administration (“NTIA”).

1 **Q. PLEASE DESCRIBE YOUR PRIOR TESTIMONY REGARDING POLE**
2 **ATTACHMENTS BEFORE THE PUBLIC UTILITY COMMISSION OF OHIO.**

3 A. I submitted written pre-filed testimony before the Public Utility Commission of Ohio
4 (“PUCO” or “Commission”) in February, 2009, also on behalf of the Ohio Cable
5 Telecommunications Commission in a matter involving Duke Energy Ohio, Inc. (*In the Matter*
6 *of the Application of Duke Energy Ohio, Inc., for an Increase in Electric Distribution Rates,*
7 *Case No. 08-709-EL-AIR, In the Matter of the Application of Duke Energy Ohio, Inc., for a Tariff*
8 *Approval, Case No. 08-710-EL-ATA, In the Matter of the Application of Duke Energy Ohio, Inc.,*
9 *for Approval to Change Accounting Methods, Case No. 08-11-EL-AAM, In the Matter of the*
10 *Application of Cincinnati Gas & Electric Company for Approval of its Rider BDP, Backup*
11 *Delivery Point, Case No. 06-718-EL-ATA.) My testimony addressed rate formula calculations*
12 *and the data inputs to those calculations for both pole and conduit third-party cable attachments,*
13 *as well as terms and conditions relating to those attachments. Although that matter settled, it is*
14 *my understanding that the pole attachment rates agreed to in that settlement were at a level*
15 *consistent with my proposed rate recommendations.*

16 **Q. HAVE YOU PREPARED A SUMMARY CONTAINING DETAILS OF YOUR**
17 **EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE?**

18 A. Yes, I have. A detailed resume summarizing my training, previous experience, and prior
19 testimony and reports is provided as Attachment 1 to this testimony.

20 **Q. WHAT HAVE YOU RELIED UPON IN PREPARING THIS TESTIMONY?**

21 A. I have relied on my education, training, research, and experience in economic analysis,
22 and my prior experience in the areas of telecommunications and utility regulation as outlined
23 above and further detailed in Attachment 1. I have considered various data and information in

1 forming my opinions, including data available on the Federal Energy Regulatory Commission
2 (“FERC”) Form 1 for Columbus Southern Power Company (“CSP”) and Ohio Power Company
3 (“OPCo”), and materials produced in the discovery taken in this matter.

4 ***Q. UNDER WHAT TERMS ARE YOU BEING COMPENSATED FOR THIS***
5 ***TESTIMONY?***

6 A. I am being compensated for the time I spend on this matter at my standard rate of \$385
7 per hour. I will also be reimbursed for any travel and miscellaneous out-of-pocket expenses
8 incurred in connection with this litigation. My compensation is not contingent on the outcome of
9 this litigation or my analysis.

10 **Purpose and Summary of Testimony**

11 ***Q. CAN YOU PLEASE DESCRIBE YOUR ASSIGNMENT AND THE PURPOSE OF***
12 ***YOUR TESTIMONY?***

13 A. I was asked by counsel for the Ohio Cable Telecommunications Association (“OCTA”)
14 to provide testimony on matters raised in this proceeding by AEP Ohio and the Commission
15 Staff pertaining to cable company rental of space on utility poles (referred to as “pole
16 attachments”) owned by CSP and OPCo (also referred to collectively as the “Utilities”).
17 My testimony will address the appropriate maximum rental rates that CSP and OPCo should be
18 permitted to charge cable operators for pole attachments and also certain of the terms and
19 conditions under which the utilities would provide access to these essential facilities. In
20 particular, my testimony will provide specific rate results for pole attachment rentals derived
21 from a proper application of the rate formula adopted by the Public Utilities Commission of Ohio
22 (“PUCO”) based on the well-established FCC formula, including any adjustments required to
23 ensure the accuracy and integrity of the underlying data inputs upon which the formula relies.

1 My testimony will also address the economic and policy reasons for setting pole attachment
2 rental rates below the maximum fully allocated rate established by the formula and closer to the
3 lower range of permissible just and reasonable rates (i.e. marginal costs).
4 Finally, my testimony addresses the importance of setting terms and conditions for pole
5 attachment rentals that do not lend themselves to discretionary, discriminatory application and
6 that would allow the utility, as the monopoly owner of the poles, to impose excessive costs or
7 engage in other behavior that serves to competitively disadvantage the cable operator vis-à-vis
8 the utility, an affiliate, or any other company in which the utility has an interest.

9 ***Q. PLEASE SUMMARIZE YOUR TESTIMONY.***

10 **A.** This testimony addresses and explains the following main points:

- 11
- 12 • In adopting the FCC formula for setting rates for pole attachments, the PUCO joined the
13 overwhelming majority of states who rely on the FCC approach in setting rates for third-
14 party occupancy of essential utility pole facilities. The FCC formula has withstood the test of
15 time as a straightforward, cost-based approach for determining just and reasonable rates for
16 pole attachments.
 - 17
 - 18 • A major feature of the FCC formula is that it can be applied with a minimum of private,
19 administrative effort using publicly available information reported in the FERC uniform
20 reporting system and involving little if any regulatory intervention. As with any formulaic
21 approach, the accuracy and integrity of the FCC formula depends on the accuracy and
22 integrity of the underlying data inputs. For this reason, it is very important that the data
23 inputs to the formula are subjected to careful scrutiny and held to a high standard as to their
24 reliability, accuracy, consistency, and ability to be verified.
 - 25
 - 26 • In Ohio, because pole rates are tariffed and set within the context of a formal rate proceeding,
27 many of the formula data inputs relied on in Staff's calculations vary from data publicly
28 reported on the utility's FERC Form 1 (and relied on by the Ohio and FCC methodology).

1 Most of these variances reflect adjustments to conform to the rate case test year since data is
2 reported on the FERC Form 1 on a calendar year basis. In addition, data inputs for certain
3 investment and expenses are based on data generated internally by the utility at a level of
4 disaggregation below that provided on the FERC Form 1. Finally, for certain inputs, namely
5 the rate of return and the depreciation accrual rate, Staff relied on its own recommendations.
6

- 7 • Because the areas where Staff's data and/or calculations diverge from the FCC methodology
8 have, as a general matter, been subject to a rate case quality review by Staff, I have for the
9 most part relied on the same input data used by Staff. The only two exceptions are to the tax
10 and depreciation elements of the carrying charge factor of the formula. Reliance on the
11 uncorrected data would permit the utilities to recover in excess of the maximum permissible
12 just and reasonable rate, which as a fully allocated cost, is by definition already well in
13 excess of the true economic cost (i.e., the marginal or incremental cost of pole attachment).
14 In the case of the tax element, my calculations correct for a simple mathematical error in the
15 application of the FCC formula. In the case of the depreciation accrual rate, my calculations
16 correct for what in my opinion is a gross inconsistency in key parameters underlying the
17 accrual rate for poles vis-a-vis other related distribution plant accounts – in particular, an
18 excessively high cost of removal for poles. As a consequence, the proposed depreciation rate
19 for poles is increasing, whereas rates for other closely-related distribution accounts as well as
20 the average accrual rate for total distribution plant is actually decreasing. These unexplained
21 anomalies for the pole account are especially suspect – and should be held to a very high
22 level of scrutiny – given the Utilities' proposed cutover to the average remaining life method
23 of calculating depreciation rates. Under the remaining life method, the values of parameters
24 such as the cost of removal have a very significant impact on the accrual rate.
25

- 26 • In addition, while I rely on Staff's data input for the rate of return element of the carrying
27 charge factor component of the formula, I make the following caveat. The FCC rules require
28 the use of a state authorized rate of return where one is available. In this context, I believe it
29 is acceptable to use the midpoint of the range of the rate of return recommended by Staff as a
30 proxy for the Commission-authorized return, but only as a temporary placeholder for the
31 actual rate of return authorized by the PUCO in this case.

- 1
- 2 • Based on a correct application of the FCC methodology, including the use of corrected input
3 data, the pole attachment rate charged cable operators by AEP Ohio should not exceed **\$7.51**
4 for CSP and **\$5.26** for OPCo - or a blended rate of **\$6.26**. The rates derived from the formula
5 are maximum not-to-exceed rates. From an economics and public policy standpoint, Staff's
6 proposed rate of **\$6.40** for CSP is strongly preferable to the maximum rate derived using the
7 rate formula, in that it is closer to (yet still well in excess of) the true economic or marginal
8 cost of pole attachment (the lower bound of the range of just and reasonable rates pursuant to
9 Section 224 of the Communications Act). Pole attachment rates in the range of \$5 to \$7 such
10 as I have calculated and as proposed by Staff, and especially accounting for make-ready
11 charges cable operators pay in addition to the rental rate, allows the Utilities to recover *much*
12 *more* than marginal attachment costs.
- 13
- 14 • From an overall societal standpoint, the closer the rate the Utilities are permitted to charge is
15 to marginal cost, the more efficient the outcome in terms of maximizing the productive use of
16 societal resources, maximizing the value to consumers (most of whom are also electricity
17 subscribers) that accrue from the benefits of competition in the broadband service market,
18 and enhancing productivity and economic development opportunities in the state by creating
19 more favorable economic conditions for broadband deployment.
- 20
- 21 • In addition to excessive attachment rates, the Utilities' proposed tariffs also contain terms
22 and conditions that similarly work to undermine the effectiveness of pole attachment
23 regulation in stemming monopoly abuses, not all of which are fully addressed by Staff.
24 These tariff provisions include new, excessive penalties for unauthorized attachments and
25 potentially onerous practices relating to safety inspections and audits. As proposed, the new
26 provisions could be applied on a discriminatory, anti-competitive, and punitive basis to third-
27 party cable attachers. The new provisions are worded to give the Utilities unfettered
28 discretion in areas previously addressed in their agreements with cable operators, and enable
29 them to raise the effective cost of third-party pole attachments and to create impediments to
30 competition and new service deployment in the broadband service market.
- 31

- 1 • Effective regulatory oversight of non-price terms and conditions as well as the price aspects
2 of pole attachment regulation is needed to help ensure an outcome that appropriately
3 balances the interests of the utility and the third-party attacher, and at the same time promotes
4 the public policy goals of a competitive telecommunications market and the widespread
5 deployment of broadband services.

6
7 **POLE ATTACHMENT RATES**

8
9 **The PUCO formula, by tracking the well-established FCC formula, is a reasonable,**
10 **economically appropriate, cost-based approach for determining just and reasonable pole**
11 **attachment rates.**

12 ***Q. PLEASE DESCRIBE THE GENERAL APPROACH FOLLOWED BY THE PUCO***
13 ***WITH RESPECT TO SETTING RATES FOR POLE ATTACHMENTS BY***
14 ***CABLE OPERATORS AND OTHER THIRD PARTY ATTACHERS.***

15 A. The formula adopted by the PUCO in 1982 for setting rates for utility pole attachments
16 tracks the formula established by the FCC for this purpose.¹ In adopting the FCC formula, the
17 PUCO joined the overwhelming majority of states who rely on the FCC approach in setting rates
18 for conduit and pole attachments. The FCC formula has withstood the test of time as a
19 straightforward and economically appropriate approach for determining just and reasonable pole

¹ See PUCO Case No. 81-1338-TP-AIR, *In the Matter of the Application of Cincinnati Bell for Authority to Adjust its Rates and Charges and to Change Its Tariffs*, Opinion and Order, dated January 7, 1983, see also PUCO Case Nos. 81-1058-EL-AIR, 82-654-EL-ATA, Opinion and Order dated December 5, 1982.

1 attachment rates and conduit rentals. A key attribute of the FCC methodology is that it is based
2 on publicly reported and verifiable data.²

3 **Q. WHAT DO YOU MEAN WHEN YOU SAY THE FCC FORMULA IS AN**
4 **ECONOMICALLY APPROPRIATE APPROACH TO SETTING RATES?**

5 A. The FCC formula is an economically appropriate approach in that it follows cost
6 allocation principles well-established in the economics literature. Under the FCC methodology,
7 the recovery of the cost of the pole attachment is based upon the concept of cost causation (i.e.,
8 cost-causer pays). Such costs reflect costs that would not be borne by the utility *but for* the
9 attacher, including a normal (reasonable) return to capital. Costs designed in this manner prevent
10 any potential situation of cross-subsidy between the utility pole owner and the third-party
11 attacher.

12 The principle of cost causation is firmly established in Section 224 of the Communications Act
13 ("the Act") upon which the FCC formula for pole attachments is based. Consistent with the
14 principle of cost causation, Section 224(d) links the pole attachment rental to marginal costs, by
15 establishing a range of reasonableness that has marginal costs as a lower bound, and fully
16 allocated cost as an upper bound. The actual FCC rate formula adheres to the *greater* fully
17 allocated cost standard described in Section 224(d), which by definition, allows the utility to
18 recover through the rental rate ongoing costs *much more* than marginal cost.³ It does so by
19 allowing recovery of a cost-causative portion (based on relative use or occupancy of usable space

² In the case of electric utilities, there are a couple of exceptions where the data relied on in the FCC rate formula is provided from the internal records of the utility. The first is the number of poles. The second is the depreciation accrual rate at the plant account level.

³ See *Alabama Power*, 311 F.3d 1357, 1363, 1370 (2002).

1 on the pole) of the utilities' operating expenses and capital costs (including overall return to
2 capital) attributable to the entire pole, based on actual booked costs.

3 **Q. WHAT IS THE FCC FORMULA FOR CALCULATING THE MAXIMUM**
4 **RENTAL RATE FOR POLES AS APPLIED TO ELECTRIC UTILITIES?**

5 A. The FCC formula consists of the following three major components: (1) the net investment
6 per bare pole, (2) a carrying charge factor, and (3) the percent of capacity (i.e., total usable space)
7 occupied by an attaché.⁴ Expressed as an equation, the FCC formula applicable to cable
8 operators is as follows:

9 <i>Maximum Pole Rental Rate =</i> 10 <i>[Net Bare Pole Cost] x [Carrying Charge Factor] x [Usage Percentage]</i>

11
12 The overarching concept underlying the FCC formula is that it can be applied in a
13 straightforward manner, using publicly available information as reported in the FERC uniform
14 Form 1 reporting system, such that it can be updated annually with a minimum of private,
15 administrative effort, and little if any regulatory involvement. As with any formulaic approach,
16 the accuracy and integrity of the FCC formula depends on the accuracy and integrity of the
17 underlying data inputs. For this reason, it is very important that the data inputs to the formula
18 are subjected to careful scrutiny and held to a high standard as to their reliability, accuracy,
19 consistency, and ability to be verified.

⁴ See *FCC Consolidated Partial Order on Reconsideration, CS Docket 97-98, 97-151, FCC 01-170 (FCC 2001 Pole Order)*, at Appendix D-2 (May 25, 2001) (setting forth the specific formulas and FERC accounts to be used when calculating the pole rate for electric utilities).

1 **Q. ARE THERE AREAS WHERE THE PUCO'S APPLICATION OF THE POLE**
2 **RATE FORMULA MAY DIVERGE FROM THE FCC METHODOLOGY?**

3 A. Yes, there are. In Ohio, pole rates are tariffed and set within the context of a formal rate
4 proceeding, where many of the data inputs to the formula are subject to independent review and
5 determination. The corresponding figures for formula inputs provided in the rate case filings
6 may vary for a host of reasons from the numbers publicly reported by the utility in the FERC
7 Form 1 reporting system relied on in the FCC methodology. In applying the FCC pole rate
8 formula in this case, Staff has generally substituted rate case numbers (data for the twelve
9 months ending May 11, 2011) in place of data from the FERC Form 1 which is reported on
10 calendar year basis (the latest being for the twelve months ending December 31, 2010).

11 **Q. ARE THERE OTHER AREAS WHERE STAFF'S APPLICATION OF THE POLE**
12 **RATE FORMULA DIVERGES FROM THE FCC METHODOLOGY?**

13 A. Yes, there are a few other relatively minor divergences. First, in the computation of
14 accumulated deferred income taxes (used in the calculation of net plant investment), Staff
15 includes FERC Account 255 (Accumulated Deferred Investment Tax Credits) in accordance with
16 PUCO rate case practice, in addition to the four accounts (Accounts 281, 282, 283, and 190)
17 included in the FCC methodology.
18 Second, Staff relies on input data generated from the Utilities' internal accounting records at a
19 level of disaggregation below that publicly available in the FERC uniform reporting system. For
20 accumulated deferred taxes, and also for the tax and administrative & general expense
21 components of the carrying charge factor, Staff relies on data provided by the Utilities at the
22 level of distribution plant, whereas the lowest level of aggregation in the FERC Form 1 for these
23 items is at the level of total electric plant in service.

1 Third, for the rate of return component of the carrying charge factor, Staff uses the midpoint of
2 the rate of return range it is recommending the PUCO adopt in this case, which is calculated at
3 7.27% for CSP and 7.33% for OPCo. The FCC formula dictates the use of an actual rate of
4 return authorized by the state commission, where one is available.

5 Finally, Staff uses its recommended depreciation accrual rates for pole plant (4.62% for CSP and
6 5.84% for OPCo) in the calculation of the depreciation carrying charge factor, where the FCC
7 formula relies on a utility-provided accrual rate either at the individual account level or at the
8 level of aggregate distribution plant.

9 ***Q. DO YOU ACCEPT THE AREAS OF DIVERGENCE FROM THE FCC***
10 ***FORMULA REFLECTED IN STAFF'S POLE RATE CALCULATIONS FOR***
11 ***PURPOSES OF THIS RATE CASE?***

12 A. Yes, with a few exceptions as described below. It is generally acceptable to rely on
13 numbers internally generated by the utility (and/or recommended by the Staff) in applying the
14 FCC rate formula in the context of a general rate proceeding such as this case, where those
15 numbers have been subject theoretically to a full and comprehensive rate case quality review by
16 Commission Staff or some other third party, and otherwise appear to be accurate and reasonable.
17 Accordingly, I have relied on the same input data used by Staff in its pole rate formula
18 calculations in my own rate calculations (presented in Attachment 2 to this testimony), with only
19 a couple of exceptions relating to the tax and depreciation elements of the carrying charge factor,
20 for the reasons set forth in the following section of my testimony. With respect to the rate of
21 return input, I believe it is acceptable to use the midpoint of the range of the rate of return
22 recommended by Staff in this case, but as explained further below, only as a temporary
23 placeholder for the actual rate of return authorized by the PUCO in this case.

1 **Based on appropriate corrections to the tax and depreciation data inputs used in Staff's**
2 **calculations of the pole rate formula, AEP Ohio should be allowed to charge cable**
3 **operators an annual pole attachment rental rate of *no more than* \$7.51 for CSP and \$5.62**
4 **for OPCo - or a blended rate of \$6.26 - per foot of pole space.**

5 ***Q. PLEASE EXPLAIN THE CORRECTION YOU MADE TO STAFF'S POLE RATE***
6 ***CALCULATIONS REGARDING THE TAX EXPENSE ELEMENT OF THE***
7 ***CARRING CHARGE COMPONENT OF THE RATE FORMULA.***

8 A. Under the FCC formula, the carrying charge factor for this element is calculated by
9 taking the relevant federal and state tax expense account figures per FERC Form 1 booked to
10 Accounts 408-411 and dividing them by net utility plant in service (i.e., total gross utility plant
11 less accumulated depreciation less accumulated deferred taxes for total plant). As mentioned
12 above, CSP and OPCo track or allocate these expenses at the level of distribution plant, such that
13 the analog carrying charge factor for the Utilities is calculated by taking the relevant tax expense
14 account figures booked to Accounts 408-411 and dividing them by net distribution plant in
15 service.

16 The problem with Staff's calculation is that it incorporates the same simple mathematical error
17 found in the Utilities' calculation relating to Account 411.1. This particular account, unlike the
18 other tax expense accounts, is a "credit" income account relating to deferred income taxes. As a
19 credit account, it is an offset rather than an addition to the current year's tax expense. Therefore,
20 under accounting rules, and as recognized under the FCC rules governing pole attachments,⁵ the
21 amount in this account must be *subtracted* when summing the various tax "debit" accounts. In

⁵ See *In re: Amendment of Commission's Rules and Policies Governing Pole Attachments*, 16 F.C.C. Rcd 12103, Appendix D-2.

1 calculating the tax expense, Staff, like the Utilities, incorrectly added this account to the other tax
2 expense accounts, instead of subtracting it. The effect of this error was to overstate the tax
3 expense by an amount equal to twice the balance in this account.⁶ My calculations incorporate
4 the correct mathematical (and accounting) treatment of Account 411.1.

5 ***Q. PLEASE EXPLAIN THE CORRECTION YOU MADE TO STAFF'S POLE RATE***
6 ***CALCULATIONS REGARDING THE DEPRECIATION EXPENSE ELEMENT***
7 ***OF THE CARRYING CHARGE COMPONENT OF THE RATE FORMULA.***

8 A. Under the FCC formula, the depreciation element of the carrying charge factor is
9 calculated by multiplying the utility's depreciation rate for pole plant (or the lowest level of plant
10 grouping identified by the utility) by the ratio of gross to net pole plant.⁷ The Utilities use pole
11 depreciation rates of 4.14% (9.00% after the gross to net ratio is applied) in the case of CSP and
12 5.54% (9.81% gross to net adjusted) in the case of OPCo, based on a 2009 depreciation study.
13 Staff uses depreciation expense factors of 4.62% for CSP and 5.84% for OPCo. These proposed
14 depreciation rates stand out as unreasonably high rates given the underlying characteristics of
15 this property account, including long average service lives and stable technology.
16 The depreciation rates proposed by the Utilities correspond to average service lives for poles
17 between 18 and 24 years, whereas poles more typically enjoy useful service lives of between 30
18 and 45 years. Even accounting for an upward adjustment to the accrual rate to permit recovery of
19 a reasonable amount of negative net salvage (salvage value of plant at retirement less the cost of
20 removal), the Utilities' proposed depreciation rates would still appear to be excessively high,
21 since on a straight-line basis, depreciation rates of 2.5 to 3% would be sufficient to recover the

⁶Correcting this error in Staff's calculations reduces Staff's formula rate from \$7.71 to \$7.13 for CSP and from \$6.10 to \$5.47 for OPCo.

⁷As noted earlier, the depreciation rate is one of a few formula inputs not required on the FERC Form 1.

1 original cost of the pole plant investment. Data with which I am familiar for other utilities
 2 indicate depreciation rates for poles more commonly in the range of 2.5% to 3%. The anomalous
 3 nature of the Utilities' proposed depreciation rates for poles is further evidenced in comparison
 4 to the rates proposed by the Utilities for other closely-related distribution plant accounts.
 5 Table 1 below compares the Utilities' proposed depreciation rates for pole plant (Account 364)
 6 with those of other closely-related distribution plants and with the average rate for total
 7 distribution plant. As shown in Table 1, for distribution plant as a whole, the composite
 8 depreciation rate is proposed to actually *decrease* from 3.52% to 3.01% for CSP and from 3.97%
 9 to 3.77% for OPCo. The same holds true for the closely-related overhead distribution accounts,
 10 Account 365 ("Overhead Conductors and Devices") and Account 369 ("Services."), which are
 11 proposed to decrease between 8% to over 50% percent. By contrast, the proposed depreciation
 12 rate for Account 364 ("Poles, Towers, and Fixtures") is proposed to increase from 4.00% to
 13 4.14% for CSP and from 4.84% to 5.54% for OPCo.

Table 1				
Comparison of Utilities' Existing and Proposed Depreciation Rates for Pole Plant, Closely-Related Distribution Plant Accounts, and Total Distribution Plant				
Columbus Southern Power				
Plant Account	364- Poles	365 – Cond/Dev.	369 - Services	Tot Distrib Plant
Existing Rate	4.00	2.86	6.74	3.52
Proposed Rate	4.14	2.42	3.17	3.01
% Change	+3.5%	-15.4	-53%	-14.5%
Ohio Power Company				
Plant Account	364- Poles	365 – Cond/Dev.	369 - Services	Tot Distrib Plant
Existing Rate	4.84	4.00	4.55	3.97
Proposed Rate	5.54	3.69	3.42	3.77
% Change	+14.5%	-7.8%	-24.8%	-5.04%
Source: Testimony of D.A. Davis, Exh. DAD-1, Schedule II, p. 14; DAD-2, Schedule II, p. 17.				

14

1 Q. **WOULD ONE EXPECT TO OBSERVE THIS DEGREE OF VARIATION**
2 **BETWEEN THE DEPRECIATION RATE FOR POLES AND THOSE OF THESE**
3 **CLOSELY-RELATED DEPRECIATION ACCOUNTS?**

4 A. No, one would not. Investment and retirement experience for these accounts tend to be
5 closely aligned, as they are typically complementary components of a distribution overhead line
6 project. Accordingly, and based on my extensive experience examining utility cost data
7 underlying pole rate formula calculations, these accounts tend to have similar underlying cost
8 parameters relating to depreciation. Indeed, the FCC methodology - which importantly, the
9 Utilities rely on to calculate the formula input for accumulated depreciation - does not rely on
10 accumulated depreciation at the detailed subaccount level at all; rather it prorates aggregate
11 electric (or distribution) plant accumulated depreciation to the various individual plant accounts
12 (i.e., 364, 365, and 369) based on the percentage of gross plant investment in the individual
13 account relative to the aggregate plant. It is instructive, therefore, that application of the FCC's
14 proration methodology results in the same percentage of accumulated depreciation to gross plant
15 for each of these three plant accounts. The FCC methodology thus implies closely aligned
16 depreciation accrual rates and underlying cost parameters for this set of distribution accounts.

17 Q. **ARE YOU ABLE TO IDENTIFY WHAT IS DRIVING THE OUTLIER NATURE**
18 **OF THE UTILITIES' PROPOSED DEPRECIATION RATES FOR POLE PLANT?**

19 A. Yes, I can. The detail underlying the Utilities' depreciation accrual calculations reveals a
20 cost of removal amount for the pole plant account that is way out of line with the other related
21 distribution plant accounts. For CSP, the cost of removal for pole plant Account 364 is 95% of
22 plant for poles as compared to 33% and 39% for the closely-related overhead plant Accounts 365

1 and 369, respectively. For OPCo, the cost of removal for pole plant Account 365 is a similarly
2 high 96% for poles vis-à-vis 38% and 31% for Accounts 365 and 369.

3 **Q. WHY DOES THE ANOMALOUSLY HIGH COST OF REMOVAL FOR THE**
4 **POLE ACCOUNT RAISE A RED FLAG?**

5 A. There are several reasons why the high removal cost for the pole account raises a red
6 flag. First, it is not readily apparent why the observed variances would exist. The distribution
7 plant accounts 364, 365, and 369 are closely related and would be expected to experience
8 negative net salvage in a similar range. As mentioned above, under the FCC proration
9 methodology utilized by the Utilities, the accumulated depreciation reserve is allocated on a
10 proportional basis to these three plant accounts so widely varying depreciation parameters is
11 inconsistent with that methodology.

12 Second, the observed discrepancy in cost of removal rates for these plant accounts is particularly
13 suspect given the fact that the Utilities have proposed to cutover to a remaining life method of
14 calculating the depreciation accrual rate. Under the remaining life method, the accrual rate is
15 more sensitive to the amount of projected future net salvage (i.e., future salvage value less the
16 cost of removal), typically a negative value for distribution plant accounts, relative to the whole
17 life approach. Because the amounts of future net salvage are projected numbers, they are
18 subject to estimation errors.

19 Third, even with audited numbers, based on my personal experience examining utility cost data,
20 including my work on the Duke Energy matter before this Commission, costs can be
21 misallocated or erroneously assigned to specific plant accounts as part of the work order process.
22 The anomalous depreciation parameters indicated for the pole account could be an artifact of
23 such misallocations.

1 **Q. PLEASE DESCRIBE THE CORRECTION YOU HAVE MADE TO THE**
2 **DEPRECIATION RATE INPUT, AND ITS JUSTIFICATION.**

3 A. Given the anomalous nature of the pole plant depreciation rate vis-à-vis other closely-
4 related distribution plant accounts, and the heightened impact of the inexplicably high cost of
5 removal for the pole plant account under the proposed remaining life method, my formula rate
6 calculations apply the proposed Utility depreciation rate for total distribution plant to the pole
7 plant category.⁸ This accomplishes two things. First, it removes the cost impact of the
8 inexplicably and unreasonably high level of cost of removal from the pole rate, as without further
9 supporting data at the level of the individual work order to verify the accuracy of these costs, it
10 would not be just and reasonable to burden third-party renters with what at its face value, is
11 excessive cost recovery – even in a fully allocated cost context.
12 Second, it provides for conformity with the proration methodology used by the Utilities to
13 allocate accumulated depreciation to the pole plant account. It is both reasonable and consistent
14 to similarly rely on the average annual depreciation rates for total distribution plant (3.01% for
15 CSP and 3.77% for OPCo) in the calculation of the depreciation expense factor for poles
16 especially where anomalies exist as is the case with poles.

17 **Q. YOU INDICATE YOU HAVE RELIED ON STAFF’S RATE OF RETURN INPUT**
18 **IN YOUR OWN CALCULATIONS, BUT ONLY AS A PLACEHOLDER VALUE**
19 **FOR THE ACTUAL RATE OF RETURN AUTHORIZED BY THE COMMISSION**
20 **IN THIS PROCEEDING. PLEASE ELABORATE.**

⁸The FCC proration method is also applied on a consistent basis to the other overhead distribution accounts used in the formula, i.e., Accounts 365 and 369.

1 A. Under FCC rules, the carrying charge factor for this element is based on the most current
2 state authorized rate of return. Where none is available, the FCC default rate of return may be
3 used. As an integral part of this rate case, the Commission will authorize a current rate of return
4 for the Utilities. Accordingly, it is that value that is ultimately the only appropriate data input for
5 the rate of return element of the carrying charge factor component of the rate formula. Until that
6 number is known however, a placeholder value is needed. Given Staff's role in this proceeding,
7 I believe Staff's rate of return input, which is based on the midpoint of the range of the rate of
8 return recommended and supported by Staff for the two utilities (7.27% for CSG and 7.33% for
9 OPCo), is the most reasonable proxy or placeholder value for the authorized return. Accordingly,
10 my calculations rely on Staff's rate of return numbers. But again, once the PUCO has authorized
11 a new rate of return in this case, it is that number that should be substituted into the formula to
12 derive the correct maximum permissible just and reasonable rate.

13 ***Q. IS THERE ANY VALIDITY TO THE UTILITIES' PROPOSED RATE OF RETURN***
14 ***INPUT VALUE OF 11.25%?***

15 A. None whatsoever. The FCC default rate of return has been set at 11.25% for the past
16 twenty years. Beside from the reality that the 11.25% number is incredibly stale, and is not
17 reflective of current conditions in the capital markets applicable to the Utilities, pursuant to FCC
18 rules, the default is only to be used in those instances where a state authorized return is not
19 available. That is simply not the case here, so there is absolutely no economic or public policy
20 justification for relying on the FCC default. The Utilities' use of the 11.25% rate of return is
21 little more than an attempt to produce a higher pole rate than is justified.

1 **Q. AFTER THE NEEDED CORRECTIONS TO DATA INPUTS ARE MADE, WHAT**
 2 **IS THE RESULTING MAXIMUM POLE ATTACHMENT RENTAL RATES**
 3 **CALCULATED USING THE REGULATED RATE FORMULA?**

4 A. After making the needed corrections to data inputs described above, as shown on Table 2,
 5 I calculate a maximum pole rental rate of \$7.51 for CSG and \$5.62 for OPCo, or a blended rate
 6 of \$6.26, per pole per year for one foot of space. My rate calculations are presented in
 7 Attachment 2 to this testimony.

Table 2			
Comparison of Maximum Permissible Just and Reasonable Pole Attachment Rates Under FCC Formula and Rates Proposed by AEP Ohio and Staff			
	Maximum Permissible Pole Rate per FCC Formula	Staff Proposed Pole Rate	AEP Ohio Proposed Pole Rate
CSP	\$ 7.51	\$ 6.40	n/a
OPCo	\$ 5.62	\$ 6.10	n/a
Blended	\$ 6.26	\$ 6.20 ⁹	\$8.12

8

9 **Q. HOW DO THE RESULTS OF YOUR FORMULA RATE CALCULATION**
 10 **COMPARE TO STAFF'S PROPOSED RENTAL RATE FOR POLES?**

11 A. Staff calculates a pole attachment rate for CSP of \$ 7.71 using the rate formula.
 12 However, as shown in Table 2, Staff proposes a maximum pole rate of \$6.40, based on its belief
 13 that "an increase from \$2.83 to \$7.71, or a 172% increase is too significant to impose in a single

1 increase.”¹⁰ Staff’s proposed \$6.40 rate “would be equal to the highest tariffed electric company
2 rate in the state,” and according to Staff, would be “reasonable...for purposes of this case.”
3 Although I too calculated a rate (\$7.51) higher than Staff’s proposed rate using the rate formula
4 (but lower than Staff’s calculated formula rate), I concur with Staff’s opinion that a \$6.40 rate
5 would be a just and reasonable rate for CSG to charge. I remain concerned, however, that even
6 if the rate were to move in the \$6.20 to \$6.26 range (which, again, is at the maximum end of the
7 range of fully allocated rates contemplated by the FCC and Ohio methodology), this would still
8 represent a substantial jump (more than 100% in the case of CSCo). For this reason I believe
9 that it would have been advisable for the Staff Report – in addition to its moderation of the
10 *calculated* rate for CSCo – also to have recommended that these steep increases be phased in
11 over a two- to three-year period.

12 As explained previously, the FCC rate formula calculates the *maximum* permissible just and
13 reasonable rate a utility may charge a cable operator based on fully allocated costs. By
14 definition, fully allocated costs reflect costs that would exist for the utility independent of (i.e.
15 even in the absence of) third-party attachers. As discussed below, there are important economic
16 and public policy reasons why a rate less than the maximum, and closer to the true economic or
17 marginal cost of pole attachments (i.e., the costs that “but for” pole attachments would not exist
18 for the utility) should be charged. Staff’s proposed rate of \$6.40 for CSP best achieves these
19 important economic and public policy objectives.

20 For OPCo, Staff calculates a maximum permissible pole rate using the rate formula of \$6.10,
21 which it recommends the Commission adopt. As shown in Table 2 on the preceding page, I have

⁹ Staff does not actually propose a blended rate, but the calculation of the blended rate is a straightforward weighted average of the utility-specific rates based on their respective pole counts.

¹⁰ Staff Report at 45.

1 calculated a lower maximum permissible rate for OPCo of \$5.62 based on appropriate
2 corrections to the tax and depreciation elements of the carrying charge factor as described above.

3 ***Q. HOW DO THE RESULTS OF YOUR FORMULA RATE CALCULATIONS***
4 ***COMPARE TO THE UTILITIES' PROPOSED RENTAL RATE FOR POLES?***

5 A. The Utilities propose a blended rate of \$8.12 for CSG and OPCo based on the weighted
6 average of the calculated formula rates for the two utilities of \$9.38 and \$7.50, respectively. As
7 shown in Table 2, I have calculated a blended rate for the Utilities, corresponding to the Utilities'
8 proposed rate, but based on my respective rate calculations. My calculated blended rate of \$6.26
9 is significantly below the \$8.12 calculated by the Utilities, as a result of appropriate corrections
10 as described above to the rate of return, tax, and depreciation elements of the carrying charge
11 factor used in the Utilities' calculations.

12 ***Q. DO YOU HAVE AN OPINION ON WHETHER THE COMMISSION SHOULD***
13 ***AUTHORIZE A BLENDED RATE FOR CSP AND OPCO BASED ON THE***
14 ***PROPOSED MERGER OF THE TWO UTILITIES?***

15 A. Yes, I do. While I have calculated a blended rate to compare to the rate calculated by the
16 Utilities, and I have no objection in principle to a unified rate for the merged enterprise, it would
17 seem somewhat premature for the Commission to adopt a blended rate for CSP and OPCo. The
18 merger has not yet taken place, and the cost data upon which the rate formula calculations have
19 been made are based on the separate operations of the two utilities. In particular, the cost data
20 upon which the calculations are based do not reflect any of the assumed integrative efficiencies
21 that would be expected to result from the proposed merger, particularly in the expense areas of
22 Administrative and General and in Maintenance. Indeed, cost savings and efficiencies, so-called

1 merger synergies, are typically the key justification for utility mergers. The authorization of a
2 blended rate on the basis of the proposed merger is logically and reasonably tied to an adjustment
3 or normalization of expenses to reflect the expected synergies of that merger. At a minimum,
4 adjustments should be made to the Administrative and General (“A&G”) and Maintenance
5 elements of the carrying charge factor component of the rate formula as they reflect precisely the
6 types of expenses one would expect the merged company to realize cost savings and efficiencies.
7 In my opinion, an adjustment of 10% over baseline expense levels would be reasonable.¹¹

8 **There are important economic and public policy reasons that support a pole attachment**
9 **rate, such as Staff’s proposed \$6.40 rate for CSP, set below the maximum permissible rate**
10 **derived using the rate formula.**

11 ***Q. MS. KRAVTIN, ARE THERE REASONS FOR KEEPING THE POLE***
12 ***ATTACHMENT RATES THAT UTILITIES ARE ALLOWED TO CHARGE***
13 ***CABLE OPERATORS BELOW THE MAXIMUM PERMISSIBLE RATES AND***
14 ***CLOSER TO THE LOWER BOUND OF JUST AND REASONABLE RATES?***

15 A. Yes, there are several important economic and policy reasons that support keeping the
16 pole attachment rates that the Utilities are allowed to charge cable operators below the upper
17 bound of just and reasonable rates (based on fully allocated costs) and closer to the lower bound
18 (based on the true economic cost of pole attachments or marginal costs). With respect to the
19 instant case, these reasons argue for authorizing a pole attachment rate for CSP that is less than
20 the \$7.51 maximum permissible rate I have calculated and no higher than \$6.40 rate proposed by

¹¹ Applying a 10% reduction to the A&G and Maintenance expenses accounts as described results in a maximum permissible blended rate of \$6.02 as compared with the \$6.26 rate based on data unadjusted for anticipated merger cost synergies.

1 Staff, and similarly for authorizing a pole attachment rate for OPCo that is no higher than the
2 \$5.62 maximum permissible rate I have calculated.

3 **Q. PLEASE EXPLAIN.**

4 A. Because the FCC formula rate is a fully allocated cost (including a reasonable return on
5 the utility's investment), by definition it exceeds the marginal cost of attachment.¹² Marginal
6 costs in this context are defined as any additional costs incurred by the utility in order to
7 accommodate or host a third-party attachment that would not exist "but for" the presence of that
8 third-party attachment. These types of costs however are precisely those that the make-ready
9 charges paid by cable operators on an up-front basis for the non-recurring or out-of-pocket costs
10 of hosting an attachment are designed to cover. Annual rental payments based on the regulated
11 rate formula provide payments to the pole owner *over and above* those make-ready charges.
12 Thus, taken together, this means that the Utilities have the opportunity to recover much more
13 than the marginal cost of attachment from a cable operator for use of otherwise available space
14 on utility poles.¹³ Plus, the utility enjoys the benefit of any and all improvements to its pole
15 assets (including greater available pole capacity to use itself or to rent to others) fully funded by
16 the make-ready charges paid by the cable operator.

¹² By design, the carrying charge factor incorporated in both the cable and telecom formulas "reflects those costs incurred by the utility in owning and maintaining pole attachment infrastructure regardless of the presence of attachments," the precise opposite from what marginal costs would be intended to reflect. *Amendment of Commission's Rules and Policies Governing Pole Attachments*, Consolidated Partial Order on Reconsideration, FCC 01-170, 16 FCC Rcd 12103, 12156 ¶ 110 (2001) ("*Reconsideration Order*"), citing *Amendment of Rules and Policies Governing Pole Attachments*, Report and Order, FCC 00-116, 15 FCC Rcd 6453, 6477-78 ¶ 44 (2000) (emphasis added). See also, *Alabama Power Co. v. FCC*, 311 F.3d 1357, 1363, 1368-1369 (11th Cir. 2002).

¹³ "The known fact is that the Cable Rate requires the attaching cable company to pay for any "make-ready" costs and all other marginal costs (such as maintenance costs and the opportunity cost of capital devoted to make-ready and maintenance costs), in addition to some portion of the fully embedded cost . . . [so that] much more than marginal cost is paid under the Cable Rate . . ." *Alabama Power Co. v. FCC*, 311 F.3d at 1368-69.

1 From an economics perspective, as long as the price for pole attachments exceeds the marginal
2 cost of attachment, the utility pole owner and its ratepayers are definitively better off financially
3 after a cable attachment than before, and any potential for cross-subsidy of the cable operator by
4 the utility or its ratepayers is avoided. Thus, even at the lowest proposed rates of \$6.40 for CSP,
5 \$5.62 for OPCo, and especially taking into account make ready charges paid by the attacher in
6 addition to the rental rate, the Utilities stand to recover *much more* than its marginal cost of
7 attachment.¹⁴ Indeed, this is true even at the existing rates of \$2.83 and \$3.72 for CSG and
8 OPCo, respectively. Conservative estimates of the marginal cost of attachment that I have seen
9 (and corroborated by my own analyses of utility data) generally fall in the \$1.00 to \$1.50 range
10 per foot of space. Given the utilities are recovering much more than the marginal cost of
11 attachment for use of otherwise available space on a utility pole, it is a “win-win” for both the
12 utility and the cable operator. It is also a “win” for the society as a whole.

13 From an overall societal standpoint, the closer the prices charged by the utility for cable’s shared
14 use of its pole facilities are to the utility’s marginal costs of attachment, the more efficient the
15 outcome in terms of maximizing the productive use of societal resources. This is the result of
16 several related economic phenomena. Pricing approximating marginal cost creates conditions
17 more likely to simulate and therefore stimulate competition market performance in the final
18 service market (i.e., broadband), with its wide-ranging benefits to consumers in the form of
19 lower prices, greater choices among new and innovative broadband services, and enhanced

¹⁴ “Significantly, when an attacher pays the cost of getting on a pole, Gulf Power stands to earn more.” See Federal Communications Commission, *In the Matter of Florida Cable Telecommunications Association, Inc., Comcast Cablevision of Panama City, Inc.; Mediacom Southeast, L.L.C.; and Cox Communications Gulf, L.L.C.; Complainants v. Gulf Power Company, Respondent (“FCTA”)*, Initial Decision of Administrative Law Judge Richard Sippel, EB Docket 04-381, rel. January 31, 2007, ¶23. See also *Id.* at ¶19: “And Gulf Power is never out of pocket because when a cable operator needs make-ready work to accommodate an attachment, the attacher pays the costs.”

1 productivity and economic development opportunities for the economy in the state of Ohio.
2 Minimizing the possibility of lost value to consumers (most of whom are also electricity
3 subscribers) and to society in general (from allowing utilities to charge too high a price for pole
4 attachments relative to the marginal cost of the attachment) is all the more compelling given the
5 relative ease with which third party attachers have historically been accommodated on utility
6 poles through a utility's normal and customary make-ready arrangements.

7 **TERMS AND CONDITIONS**

8 **The Utilities' proposed tariff contains a number of provisions that work to undermine the**
9 **effectiveness of pole attachment regulation in stemming monopoly abuses, not all of which**
10 **are fully addressed in Staff's Report.**

11 ***Q. IN ADDITION TO EXCESSIVE ATTACHMENT RATES, ARE THERE OTHER***
12 ***ISSUES RELATING TO ACCESS TO THE UTILITIES' ESSENTIAL POLE***
13 ***FACILITIES THAT ARE ALSO IMPORTANT IN PREVENTING POTENTIAL***
14 ***MONOPOLY ABUSES BY THE UTILITY?***

15 A. Yes, there are. The very reason why the rates, terms and conditions of pole attachments
16 came to be regulated in the first instance is due to the bottleneck monopoly status of poles and
17 the fact that these essential facilities historically have been used for anti-competitive ends. The
18 fundamental premise underlying the FCC's development and use of the rate formula upon which
19 the PUCO rate formula is based is that unless the utility is subject to regulatory pricing standards
20 based on well-established economic cost allocation principles, the pole-owning utility will be
21 able to exploit its monopoly power and charge excessively high, economically inefficient rates.

1 The same holds true with respect to the multitude of non-price factors under the utility's control
2 dealing with third-party access to the essential pole facilities, i.e., the numerous terms and
3 conditions established by the utility as part of the pole attachment rental process.

4 **Numerous provisions in the Utilities' proposed tariff, including new unilaterally-imposed**
5 **rules for inspections and audits, and new potentially onerous penalties for unauthorized or**
6 **unreported attachments, violate core principles of effective pole attachment regulation.**

7 ***Q. PLEASE IDENTIFY THOSE TERMS AND CONDITIONS IN THE UTILITIES'***
8 ***PROPOSED TARIFF THAT ARE INCONSISTENT WITH EFFECTIVE POLE***
9 ***REGULATION.***

10 A. There are several terms and conditions in the Utilities' proposed tariff that violate core
11 principles underlying effective pole regulation. Among these are new processes for inspections
12 and audits and a new set of penalties for unauthorized or unreported attachments found during
13 the inspection process.

14 ***Q. PLEASE EXPLAIN WHY THESE PROPOSED TARIFF REVISIONS ARE***
15 ***PROBLEMATIC IN THE CONTEXT OF EFFECTIVE POLE REGULATION.***

16 A. First, and foremost, these new provisions were unilaterally proposed by the Utilities. It is
17 my understanding that matters involving inspections and audits have historically been addressed
18 in the Utilities' pole attachment agreements with cable operators. Significant modifications to
19 terms and conditions of access as set forth in Utility/Third-party agreements such as these should
20 be mutually agreed upon and not unilaterally imposed by the pole-owning monopolist. As
21 discussed above, the essence of pole regulation is to limit the pole-owning utility's ability to
22 exert its market power over poles and engage in anticompetitive behavior with respect to cable
23 operators and other third parties for whom poles are essential facilities. Unilaterally imposed

1 changes do not work under conditions where one party has monopoly power with respect to the
2 other, and any bargaining between the parties – either implicit or explicit – is asymmetric in
3 favor of the party with market power. In this context, even the addition of seemingly innocuous
4 language can have significant potential anticompetitive implications.

5 For example, it is my understanding that current Utility pole attachment contracts with cable
6 operators provide for periodic safety inspections and audits at the cable operator’s expense, but
7 these are limited to be no more frequent than every five years. The proposed tariff language
8 modifies this agreement to “every five (5) years *or more often if, in the Company’s sole*
9 *discretion*, the conditions may warrant.” By granting itself sole discretion, the Utilities would
10 be able to use the inspection and audit process as a means of effectively increasing the costs of
11 attachment for the Licensee for its own private gain. The Utilities would have both the
12 opportunity and incentive to shift costs appropriately borne by the utility as part of its provision
13 of core electricity services onto a third-party cable attacher, and also to impose unnecessary costs
14 in a discriminatory manner strictly for anti-competitive purposes. Accordingly, consistent with
15 principles of effective regulation, the addition of such language and any other term or condition
16 that would reflect an outcome inconsistent with a free market outcome (i.e., one that would result
17 from negotiations between a cable operator and the utility if the two parties had equal, or close to
18 equal, bargaining power) should not be permitted.

19 The new inspection and audit provisions also conflict with another basic tenet of effective
20 regulation, namely the cost causation principle. Under the economic principle of cost causation,
21 costs are properly attributed to the entity causally responsible, i.e., the entity but for whose
22 existence (or action) a cost would not have been incurred. In keeping with the principle of cost
23 causation, the PUCO should reject any term or condition that would result in a third-party cable

1 attacher being attributed or charged a fee unrelated to, or materially more than, the costs directly
2 attributable to its own actions or existence and/or that would result in a double-recovery of costs
3 or a recovery of costs for which there is no lost economic opportunity for the utility.

4 The new provisions, as I understand them, do not limit the Utilities' ability to charge the cable
5 operators for only that portion of the inspection and audit expenses that relate specifically to the
6 cable operator's facilities. Nor do the proposed revisions appear to limit the Utilities' ability to
7 charge the cable operator for general safety inspections the costs of which are already recovered
8 through the annual pole rental rate.

9 ***Q. IN ADDITION TO THE NEW TARIFF LANGUAGE RELATING TO***
10 ***INSPECTIONS AND AUDITS, YOU ALSO IDENTIFY TARIFF AMENDMENTS***
11 ***RELATING TO UNREPORTED OR UNAUTHORIZED ATTACHMENTS.***
12 ***PLEASE EXPLAIN WHY THIS AMENDMENT IS PROBLEMATIC.***

13 A. As the case with inspections and audits, the issue of unreported or authorized attachments
14 is also currently covered in utility pole agreements as I understand it. Accordingly, the same
15 problem relating to the Utilities' unilateral imposition of changes to previously-agreed upon,
16 established processes applies. The Utilities' proposal appears punitive by design, and it is
17 unreasonable to impose new, potentially onerous penalties that would apply retroactively, i.e., to
18 attachments installed before the next full audit. The FCC in its recent April 2011 Pole Order
19 affirmed this very point. While that the FCC did relax some of its previously imposed limits on
20 penalties for unauthorized attachments to allow for a "multifaceted system" of penalties adopted
21 by the Oregon PUC, it specifically noted the relaxed guidelines would apply "on a prospective

1 basis only – i.e., to new agreements, or amendments to existing agreements, executed after the
2 effective date of this Order.”¹⁵

3 Moreover, citing to the Oregon system, the FCC highlighted the inclusion of provisions
4 specifically intended to limit the pole owner’s ability to use such penalty provisions to
5 anticompetitive ends and in contravention of effective pole regulation. These include: limiting
6 fees to violations found “in an inspection in which the pole occupant has declined to participate;”
7 requiring the pole owner to properly notice the attacher of violations prior to imposing sanctions;
8 giving the attacher the opportunity to correct the violation to avoid sanctions; and assigning cost
9 responsibility to the cost-causing party (including the pole owner). ¹⁶ To the extent the PUCO
10 allows the Utilities to make any additions to their tariffs relating to penalties for authorized or
11 unreported attachments, at a minimum, these kinds of limitations should also be included.

12 It serves no valid economic or public policy purpose, for example, to impose penalties for
13 unauthorized attachments which apply to attachments (such as on drop poles) which at the time
14 of their installation were not required to be separately permitted and therefore would not have
15 been considered “unauthorized.” Neither, as recognized by the FCC, does it serve any valid
16 purpose to impose penalties for unreported attachments that relate to “poor record keeping or
17 changes in pole ownership, rather than because of the attacher’s failure to follow proper
18 protocol.”¹⁷ Indeed, the only purpose such practices would serve is the enrichment of the
19 Utility’s coffers to the detriment of third-party attachers and broadband competition.

20

¹⁵ See *Implementation of Section 224 of the Act, A National Broadband Plan for Our Future*, 26 F.C.C.R. 5240 ¶114 (2011) (“2011 FCC Order”).

¹⁶ *Id.* at 115.

¹⁷ *Id.* at ¶114.

1 A valid purpose of imposing penalties of this nature would be to provide an economic
2 disincentive to third-parties to place unauthorized attachments in order to avoid paying an
3 appropriate rental rate to recover the costs they are causally responsible for. Absent the baseline
4 audit, it is not even known to what extent, if any, truly unauthorized attachments represent a
5 significant problem in the Utilities' system in terms of real economic or safety consequence. I
6 am not aware of any testimony by the Utilities' in this proceeding that establishes the existence
7 of a serious problem in the field or otherwise demonstrates the need for such significant
8 increases in the penalties for unreported or unauthorized attachments. Absent such
9 demonstrations, the PUCO should be very mindful of the incentive and opportunity for
10 anticompetitive behavior on the part of the Utilities that the proposed tariff revisions present.

11 ***Q. MS. KRAVTIN, DOES THIS CONCLUDE YOUR TESTIMONY AT THIS TIME?***

12 ***A. Yes, it does.***

Patricia D. Kravtin

57 Phillips Avenue
Swampscott, MA 01907
pdkravtin@comcast.net

Summary Consulting economist with specialization in telecommunications, cable, and energy markets. Extensive knowledge of complex economic, policy and technical issues facing incumbents, new entrants, regulators, investors, and consumers in rapidly changing telecommunications, cable, and energy markets.

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Providing expert witness services and full range of economic, policy, and technical advisory services in the telecommunications, cable, and energy fields.

SENIOR VICE PRESIDENT/SENIOR ECONOMIST
1982–2000 Economics and Technology, Inc. Boston, MA
Active participant in regulatory proceedings in over thirty state jurisdictions, before the Federal Communications Commission, Federal Energy Regulatory Commission, and other international regulatory authorities on telecommunications, cable, and energy matters.

Provided expert witness and technical advisory services in connection with litigation and arbitration proceedings before state and federal regulatory agencies, and before U.S. district court, on behalf of diverse set of public and private sector clients (see Record of Prior Testimony).

Extensive cable television regulation expertise in connection with implementation of the Cable Act of 1992 and the Telecommunications Act of 1996 by the Federal Communications Commission and local franchising authorities.

Led analysis of wide range of issues related to: rates and rate policies; cost methodologies and allocations; productivity; cost benchmarking; business case studies for entry into cable, telephony, and broadband markets; development of competition; electric industry restructuring; incentive or performance based regulation; universal service; access charges; deployment of advanced services and broadband technologies; and access to pole attachments and other rights-of-way.

Served as advisor to state regulatory agencies, assisting in negotiations with utilities, non-partial review of record evidence, deliberations and drafting of final decisions.

Author of numerous industry reports and papers on topics including market structure and competition, alternative forms of regulation, patterns of investment, telecommunications modernization, and broadband deployment (see listing of Reports and Studies).

Invited speaker before various national organizations, state legislative committees and participant in industry symposiums.

Grant Reviewer for Broadband Technology Opportunities Program (BTOP) administered by National Telecommunications and Information Administration (NTIA), Fall 2009.

RESEARCH/POLICY ANALYST

1978–1980 Various Federal Agencies Washington, DC
Prepared economic impact analyses related to allocation of frequency spectrum (Federal Communications Commission).

Performed financial and statistical analysis of the effect of securities regulations on the acquisition of high-technology firms (Securities and Exchange Commission).

Prepared analyses and recommendations on national economic policy issues including capital recovery. (U.S. Dept. of Commerce).

Education

1980–1982 Massachusetts Institute of Technology Boston, MA
Graduate Study in the Ph.D. program in Economics (Abd).
General Examinations passed in fields of Government Regulation of Industry, Industrial Organization, and Urban and Regional Economics.

National Science Foundation Fellow.

1976–1980 George Washington University Washington, DC
B.A. with Distinction in Economics.

Phi Beta Kappa, Omicron Delta Epsilon in recognition of high scholastic achievement in field of Economics. Recipient of four-year honor scholarship.

Prof. Affiliation

American Economic Association

Reports and Studies (authored and co-authored)

Report on the Financial Viability of the Proposed Greenfield Overbuild in the City of Lincoln, California, prepared for Starstream Communications, August 12, 2003.

“Assessing SBC/Pacific’s Progress in Eliminating Barriers to Entry, The Local Market in California is Not Yet ‘Fully and Irreversibly Open,” prepared for the California Association of Competitive Telecommunications Companies (CALTEL), August 2000.

“Final Report on the Qualifications of Wide Open West-Texas, LLC For a Cable Television Franchise in the City of Dallas,” prepared for the City of Dallas, July 31, 2000.

“Final Report on the Qualifications of Western Integrated Networks of Texas Operating L.P. For a Cable Television Franchise in the City of Dallas,” prepared for the City of Dallas, July 31, 2000.

“Price Cap Plan for USWC: Establishing Appropriate Price and Service Quality Incentives in Utah” prepared for The Division of Public Utilities, March, 2000.

“Building a Broadband America: The Competitive Keys to the Future of the Internet,” prepared for The Competitive Broadband Coalition, May 1999.

“Broken Promises: A Review of Bell Atlantic-Pennsylvania's Performance Under Chapter 30,” prepared for AT&T and MCI Telecommunications, June 1998.

“Analysis of Opportunities for Cross Subsidies Between GTA and GTA Cellular,” prepared for Guam Cellular and Paging, submitted to the Guam Public Utilities Commission, July 11, 1997.

“Reply to Incumbent LEC Claims to Special Revenue Recovery Mechanisms,” submitted in the Matter of Access Charge Reform in CC Docket 96-262, February 14, 1997.

“Assessing Incumbent LEC Claims to Special Revenue Recovery Mechanisms: Revenue opportunities, market assessments, and further empirical analysis of the ‘Gap’ between embedded and forward-looking costs,” FCC CC Docket 96-262, January 29, 1997.

“Analysis of Incumbent LEC Embedded Investment: An Empirical Perspective on the ‘Gap’ between Historical Costs and Forward-looking TSLRIC,” Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, FCC CC 96-98, May 30, 1996.

“Reply to X-Factor Proposals for the FCC Long-Term LEC Price Cap Plan,” prepared for the Ad Hoc Telecommunications User Committee, submitted in FCC CC Docket 94-1, March 1, 1996.

“Establishing the X-Factor for the FCC Long-Term LEC Price Cap Plan,” prepared for the Ad Hoc Telecommunications User Committee, submitted in FCC CC Docket 94-1, December 1995.

“The Economic Viability of Stentor's ‘Beacon Initiative,’ exploring the extent of its financial dependency upon revenues from services in the Utility Segment,” prepared for Unitel, evidence before the Canadian Radio-television and Telecommunications Commission, March 1995.

“Fostering a Competitive Local Exchange Market in New Jersey: Blueprint for Development of a Fair Playing Field,” prepared for the New Jersey Cable Television Association, January 1995.

“The Enduring Local Bottleneck: Monopoly Power and the Local Exchange Carriers,” Feb. 1994.

“A Note on Facilitating Local Exchange Competition,” prepared for E.P.G., Nov. 1991.

“Testing for Effective Competition in the Local Exchange,” prepared for the E.P.G., October 1991.

“A Public Good/Private Good Framework for Identifying POTS Objectives for the Public Switched Network” prepared for the National Regulatory Research Institute, October 1991.

“Report on the Status of Telecommunications Regulation, Legislation, and modernization in the states of Arkansas, Kansas, Missouri, Nebraska, Oklahoma and Texas,” prepared for the Mid-America Cable-TV Association, December 13, 1990.

“The U S Telecommunications Infrastructure and Economic Development,” presented at the 18th Annual Telecommunications Policy Research Conference, Airlie, Virginia, October 1990.

“An Analysis of Outside Plant Provisioning and Utilization Practices of US West Communications in the State of Washington,” prepared for the Washington Utilities and Transportation Commission, Mar.1990.

“Sustainability of Competition in Light of New Technologies,” presented at the Twentieth Annual Williamsburg Conference of the Institute of Public Utilities, Williamsburg, VA, December 1988.

“Telecommunications Modernization: Who Pays?,” prepared for the National Regulatory Research Institute, September 1988.

“Industry Structure and Competition in Telecommunications Markets: An Empirical Analysis,” presented at the Seventh International Conference of the International Telecommunications Society, MIT, July1988.

“Market Structure and Competition in the Michigan Telecommunications Industry,” prepared for the Michigan Divestiture Research Fund Board, April 1988.

“Impact of Interstate Switched Access Charges on Information Service Providers - Analysis of Initial Comments,” submitted in FCC CC Docket No. 87-215, October 26, 1987.

“An Economic Analysis of the Impact of Interstate Switched Access Charge Treatment on Information Service Providers,” submitted in FCC CC Docket No. 87-215, September 24, 1987.

“Regulation and Technological Change: Assessment of the Nature and Extent of Competition from A Natural Industry Structure Perspective and Implications for Regulatory Policy Options,” prepared for the State of New York in collaboration with the City of New York, February 1987.

“BOC Market Power and MFJ Restrictions: A Critical Analysis of the ‘Competitive Market’ Assumption,” submitted to the Department of Justice, July 1986.

“Long-Run Regulation of AT&T: A Key Element of a Competitive Telecommunications Policy,” *Telematics*, August 1984.

“Economic and Policy Considerations Supporting Continued Regulation of AT&T,” submitted in FCC CC Docket No. 83-1147, June 1984. “Multi-product Transportation Cost Functions,” MIT Working Paper, September 1982.

Record of Prior Testimony

2011

Before the **Virginia State Corporation Commission**, *In the Matter of Determining Appropriate Regulation of Pole Attachments and Cost Sharing in Virginia*, Case No. PUE-2011-00033, Affidavit submitted June 22, 2011, Oral Testimony given July 13, 2011.

Before the **Public Utility Commission of Texas**, State Office of Administrative Hearings, *Petition of CPS Energy for Enforcement Against AT&T Texas and Time Warner Cable Regarding Pole Attachments*, SOAH Docket No. 473-09-5470, PUC Docket No. 36633, Supplemental Testimony submitted March 17, 2011; Further Supplemental Testimony submitted April 22, 2011, Cross-examination September 13, 2011.

2010

Before the **General Court of Justice Superior Court Division, State of North Carolina, County of Rowan**, *Time Warner Entertainment– Advance/Newhouse Partnership, Plaintiff, V. Town Of Landis, North Carolina, Defendant*, 10 CVS 1172, submitted October 20, 2010, Deposition December 1, 2010, Cross-examination July 20, 2011.

Before the **Federal Communications Commission**, *In the Matter of Implementation of Section 224 of the Act; Amendment of the Commission's Rules and Policies Governing Pole Attachments*, WC Docket No. 07-245, GN Docket No. 09-51. Report submitted August 16, 2010, Attachment A to Comments filed by the National Cable and Telecommunications Association.

Before the **Public Utility Commission of Texas**, State Office of Administrative Hearings, *Petition of CPS Energy for Enforcement Against AT&T Texas and Time Warner Cable Regarding Pole Attachments*, SOAH Docket No. 473-09-5470, PUC Docket No. 36633, Direct Testimony submitted July 23, 2010.

Before the **Kentucky Public Service Commission**, *In the Matter of: Application of Kentucky Utilities Company for An Adjustment of its Base Rates*, Case No. 2009-00548, submitted April 22, 2010.

Before the **Kentucky Public Service Commission** *In the Matter of: Application of Louisville Gas and Electric Company for An Adjustment of its Electric and Gas Base Rates*, Case No. 2009-00549, submitted April 22, 2010.

Before the **Arkansas Public Service Commission**, *Coxcom, Inc., D/B/A Cox Communications, Complainant V. Arkansas Valley Electric Cooperative Corporation, Respondent*. Docket No. 09-133-C, submitted March 17, 2010.

2009

BeBfore the Circuit Court of the Thirteenth Judicial Circuit in and for Hillsborough County, State of Florida, Tampa Electric Company, Plaintiff, vs. Bright House Networks, LLC, Defendant, Case No. 06-00819, Division L. Expert Report submitted December 30, 2009, Deposition February 2, 2010, Cross-examination, March 24, 2010.

Before the **Superior Court of the State Of Washington for the County of Pacific**, *Pacific Utility District No. 2 Of Pacific County, Plaintiff, V. Comcast of Washington Iv, Inc., Centurytel of Washington, Inc., and Falcon Community Ventures I, L.P. D/B/A Charter Communications, Defendants*, Case No. 07-2-00484-1, Expert Report submitted September 18, 2009, Reply Report submitted October 16, 2009, Deposition December 21, 2009, Deposition December 21, 2009, Cross-examination October 12-13, 2010.

Before the **Public Utilities Commission of Ohio**, *In the Matter of the Application of Duke Energy Ohio, Inc., for an Increase in Electric Distribution Rates, Case No. 08-709-EL-AIR, In the Matter of the Application of Duke Energy Ohio, Inc., for a Tariff Approval, Case No. 08-710-EL-ATA, In the Matter of the Application of Duke Energy Ohio, Inc., for Approval to Change Accounting Methods, Case No. 08-11-EL-AAM, In the Matter of the Application of Cincinnati Gas & Electric Company for Approval of its Rider BDP, Backup Delivery Point, Case No. 06-718-EL-ATA*, filed February 26, 2009.

2008

Before the **Arkansas Public Service Commission**, *In the Matter of a Rulemaking Proceeding to Establish Pole Attachment Rules In Accordance With Act 740 of 2007*, Docket No. 08-073-R, filed May 13, 2008, reply filed June 3, 2008, Cross-examination, June 10, 2008.

Before the **Federal Communications Commission**, *In the Matter of Implementation of Section 224 of the Act; Amendment of the Commission's Rules and Policies Governing Pole Attachments*, WC Docket No. 07-245, RM 11293, RM 11303, filed March 7, 2008, reply filed April 22, 2008.

2006

Before the **State of New Jersey Board of Public Utilities**, Office of Administrative Law, *in the Matter of the Verified Petition of TCG Delaware Valley, Inc. and Teleport Communications New York for an Order Requiring PSE&G Co. to Comply with the Board's Conduit Rental Regulations*, OAL Docket PUC 1191-06, BPU Docket No.EO0511005, filed September 29, 2006; rebuttal filed November 17, 2006.

Before the **Federal Communications Commission**, *In the Matter of Florida Cable Telecommunications Association, Inc., Comcast Cablevision of Panama City, Inc.; Mediacom Southeast, L.L.C.; and Cox Communications Gulf, L.L.C.; Complainants v. Gulf Power Company, Respondent*. EB Docket No. 04-381. Testimony on behalf of Complainants filed March 31, 2006, Deposition March 15, 2006, Cross-Examination April 26-27, 2006.

2005

Before the **United States District Court for the Eastern District of New York**, *Coastal Communication Service, Inc. and Telebeam Telecommunications Corporation, Plaintiffs - against -The City of New York and New York City Department of Information Technology and Telecommunications*, 02 Civ. 2300 (RJD) (SMG), Expert Report filed February 4, 2005; Rebuttal Expert Report, filed August 29, 2005, Deposition December 1, 2005.

2004

Before the **Ontario Energy Board**, *In the Matter of the Ontario Energy Board Act 1998*, S.O.1998, c.15, (Schedule B); and *In the Matter of an Application pursuant to section 74 of the Ontario Energy Board Act, 1998* by the Canadian Cable Television Association for an Order or Orders to amend the licenses of electricity distributors, RP-2003-024, Reply Evidence, filed September 27, 2004 (jointly with Paul Glist), Cross-examination October 26-27, 2004.

2003

Before the **United States District Court for the Southern District of California**, *Level 3 Communications, LLC v. City of Santee*, Civil Action No. 02-CV-1193, Rebuttal Expert Report, filed July 18, 2003.

2002

Before the **New York State Public Service Commission**, *In the Matter of the Cable Television & Telecommunications Association of New York, Inc., Petitioner, v. Verizon New York, Inc., Respondent*, Affidavit filed December 19, 2002.

Before the **West Virginia Public Service Commission**, *Community Antenna Service, Inc. v. Charter Communications*, Case No. 01-0646-CTV-C, Live Direct Testimony and Cross-examination, June 12, 2002.

Before the **Public Service Commission of the District of Columbia**, *Comcast Cablevision of the District, L.L.C., Complainant, v. Verizon Communications Inc. - Washington, D.C., Respondent*, Formal Case No. 1006, Direct Testimony filed June 11, 2002; Rebuttal Testimony filed June 24, 2002.

Before the **Federal Communications Commission**, in *Cavalier Telephone, LLC, Complainant, v. Virginia Electric & Power Co., D/b/a Dominion Virginia Power, Respondent*, Case No. EB-02-MD-005, Declaration filed May 21, 2002.

Before the **Puerto Rico Telecommunications Regulatory Board**, in *Re: Petition of Centennial Puerto Rico License Corp. for arbitration pursuant to Sections 252(b) of the Telecommunications Act of 1996 to Establish an Interconnection Agreement with Puerto Rico Telephone Company*, on behalf of Centennial Puerto Rico License Corp., Direct Testimony filed April 16, 2002; Deposition May 7, 2002, May 14, 2002; Reply Testimony filed May 20, 2002, Cross-examination May 22, 2002.

Before the **Federal Energy Regulatory Commission**, in *Re: In the Matter of Transcontinental Gas Pipe Line Corporation*, Docket No. RP01-245, on behalf of the University of Maryland-College Park, Johns Hopkins University and Johns Hopkins University Health System, and the North Carolina Utilities Commission, Cross-answering Testimony filed January 23, 2002; Rebuttal Testimony filed May 31, 2002, Cross-examination July 31, 2002.

2001

Before the **United States District Court for the Northern District of New York**, *TC Systems, Inc. and Teleport Communications-New York vs. Town of Colonie, New York*, Civil Action No. 00-CV-1972, Expert Report filed November 16, 2001; Deposition December 7, 2001, Rebuttal Expert Report filed December 20, 2001, Deposition January 9, 2002.

Before the **Federal Energy Regulatory Commission**, in *Re: In the Matter of Transcontinental Gas Pipe Line Corporation*, Docket No. RP01-245, on behalf of the University of Maryland-College Park, Johns Hopkins University and Johns Hopkins University Health System, and the North Carolina Utilities Commission, filed November 15, 2001.

Before the **Public Service Commission of the District of Columbia**, Comcast Cable Communications, Inc. d/b/a/Comcast Cable of Washington, D.C., Complainant, v. Verizon Communications Inc. – Washington, D.C., Respondent, filed September 21, 2001.

Before the **Public Utility Commission of Texas**, State Office of Administrative Hearings, SOAH Docket No. 473-00-1014, PUC Docket No. 22349, *Application of Texas-New Mexico Power Company for Approval of Unbundled Cost of Service Rate Pursuant to PURA § 39.201 and Public Utility Commission Substantive Rule §25.344*, on behalf of Cities Served by Texas-New Mexico Power, filed January 25, 2001.

2000

Before the **Puerto Rico Telecommunications Regulatory Board**, in *AT&T of Puerto Rico, Inc. et al v. Puerto Rico Telephone Company, Inc., Re: Dialing Parity*, Docket Nos. 97-Q-0008, 98-Q-0002, on behalf of Lambda Communications Inc., Cross-examination October 19-20, 2000.

Before the **Department of Telecommunications and Energy of the Commonwealth of Massachusetts**, Docket No. DTE 98-57 – Phase III, *Re: Bell Atlantic- Massachusetts Tariff No. 17 Digital Subscriber Line Compliance Filing and Line Sharing Filing*, (Panel Testimony with Joseph Riolo, Robert Williams, and Michael Clancy) on behalf of Rhythms Links Inc. and Covad Communications Company, filed July 10, 2000.

Before the **New York State Public Service Commission** in *Re: Proceeding on Motion of the Commission to Examine New York Telephone Company's Rates for Unbundled Network Elements* on behalf of the Cable Television & Telecommunications Association of New York, Inc., Direct Testimony filed June 26, 2000, Supplemental Testimony filed November 29, 2000.

Before the **Maryland Public Service Commission**, on behalf of Rhythms Links Inc. and Covad Communications Company, filed jointly with Terry L. Murray and Richard Cabe, May 5, 2000.

Before the **Public Utility Commission of Texas**, in *Re: Proceeding to Examine Reciprocal Compensation Pursuant to Section 252 of the Federal Telecommunications Act of 1996*, CC Docket No. 21982, on behalf of AT&T Communications of Texas, L.P., TCG Dallas, and Teleport Communications Houston, Inc., filed March 31, 2000.

Before the **Federal Communications Commission**, in *Re: In the Matter of Price Caps Performance Review for Local Exchange Carriers, Access Charge Reform*, CC Dockets 94-1, 96-262, on behalf of Ad Hoc Telecommunications Users Committee, filed January 24, 2000.

Before the **Federal Energy Regulatory Commission**, in *Re: In the Matter of Northern Border Pipeline Company*, on behalf of the Canadian Association of Petroleum Producers and the Alberta Department of Resource Development, filed January 20, 2000.

1999

Before the **Connecticut Department of Public Utilities**, in *Re: Evaluation and Application to Modify Franchise Agreement by SBC Communications Inc., Southern New England telecommunications Corporation and SNET Personal Vision, Inc.*, Docket No. 99-04-02, on behalf of the Office of Consumer Counsel, filed June 22, 1999; cross-examination July 8, 1999

Before the **Illinois Commerce Commission**, in *Re: Illinois Commerce Commission on its own Motion v. Illinois Bell Telephone Company; et al: Investigation into Non-Cost Based Access Charge Rate Elements in the Intrastate Access Charges of the Incumbent Local Exchange Carriers in Illinois, Illinois Commerce Commission on its own Motion Investigation into Implicit Universal Service Subsidies in Intrastate Access Charges and to Investigate how these Subsidies should be Treated in the Future, Illinois Commerce Commission on its own motion Investigation into the Reasonableness of the LS2 Rate of Illinois Bell Telephone Company*, Docket No. 97-00601, 97-0602, 97-0516, Consolidated, on behalf of City of Chicago, filed January 4, 1999; rebuttal February 17, 1999.

Before the **Puerto Rico Telecommunications Regulatory Board**, in *Re: In the Matter of Arbitration of Interconnection Rates, Terms and Conditions between Centennial Wireless PCS Operations Corp., Lambda Communications Inc., and the Puerto Rico Telephone Company*, behalf of Centennial Wireless PCS Operations Corp. and Lambda Communications Inc., cross-examination February 16, 1999.

1998

Before the **California Public Utilities Commission**, in *Re: In the Matter of the Application of Pacific Bell (U 1001 C), a Corporation, for Authority for Pricing Flexibility and to Increase Prices of Certain Operator Services, to Reduce the Number of Monthly Assistance Call Allowances, and Adjust Prices for Four Centrex Optional Features*, Application No. 98-05-038, on behalf of County of Los Angeles, filed November 17, 1998, cross-examination, December 9, 1998.

Before the **Puerto Rico Telecommunications Regulatory Board**, in *Re: In the Matter of PRTC's Tariff K-2 (Intra-island access charges)*, Docket no. 97-Q-0001, 97-Q-0003, on behalf of Lambda Communications, Inc., filed October 9, 1998, cross-examination October 9, 1998.

Before the **Connecticut Department of Public Utility Control**, in *Re: Application of the Southern New England Telephone Company*, Docket no. 98-04-03, on behalf of the Connecticut Office of Consumer Counsel, filed August 17, 1998, cross-examination February 18, 1999.

Before the **California Public Utilities Commission**, in *Re: Pacific Gas & Electric General Rate Case*, A.97-12-020, on behalf of Office of Rate Payers Advocates CA PUC, filed June 8, 1998.

1997

Before the **South Carolina Public Service Commission**, in *Re: Proceeding to Review BellSouth Telecommunications, Inc.'s Cost for Unbundled Network Elements*, Docket no. 97-374-C, on behalf of the South Carolina Cable Television Association, filed November 17, 1997.

Before the **State Corporation Commission of Kansas**, in *Re: In the Matter of and Investigation to Determine whether the Exemption from Interconnection Granted by 47 U.S.C. 251(f) should be Terminated in the Dighton, Ellis, Wakeeney, and Hill City Exchanges*, Docket No. 98-GIMT-162-MIS, on behalf of classic Telephone, Inc., filed October 23, 1997.

Before the **Georgia Public Services Commission**, in *Re: Review of Cost Studies, Methodologies, and Cost-Based Rates for Interconnection and Unbundling of BellSouth Telecommunications Services*, Docket No. 7061-U, on behalf of the Cable Television Association of Georgia, filed August 29, 1997, cross-examination September 19, 1997.

Before the **Federal Communications Commission**, in *Re: In the Matter of Price Caps Performance Review for Local Exchange Carriers, Access Charge Reform*, CC Dockets 94-1, 96-262, on behalf of Ad Hoc Telecommunications Users Committee, filed July 11, 1997.

Before the **Federal Communications Commission**, in *Re: In the Matter of Amendment of Rules and Policies Governing Pole Attachments*, CS Docket 97-98, on behalf of NCTA, filed June 27, 1997.

Before the **Public Utilities Commission of the State of California**, in *Re: Rulemaking on the Commission's Own Motion to Govern Open Access to Bottleneck Services and Establish a Framework for Network Architecture Development of Dominant Carrier Networks*, R.93-04-003, I.93-04-002AT&T, filed March 19, 1997, reply April 7, 1997.

Before the **Puerto Rico Telecommunications Regulatory Board**, in *Re: In the Matter of Centennial Petition for Arbitration with PRTC*, on behalf of Centennial Cellular Corporation, filed February 14, 1997, supplemental March 10, 1997.

Before the **Federal Communications Commission**, in *Re: In the Matter of Access Charge Reform*, CC Docket 96-262, on behalf of AT&T, filed January 29, 1997, reply February 14, 1997.

1996

Before the **New Jersey Board of Public Utilities**, in *Re: In the Matter of the Investigation Regarding Local Exchange Competition for Telecommunications Services*, TX95120631, on behalf of New Jersey Cable Television Association, filed on August 30, 1996, reply September 9, 1997, October 20, 1997, cross-examination September 12, 1996, December 20, 1996.

Before the **State Corporation Commission of the State of Kansas**, in *Re: In the Matter of a General Investigation Into Competition Within the Telecommunications Industry in the State of Kansas*, 190, 492-U 94-GIMT-478-GIT, on behalf of Kansas Cable Telecommunications Association, Inc., filed July 15, 1996, cross-examination August 14, 1996.

Before the **Federal Communications Commission**, in *Re: Price Caps Performance Review for Local Exchange Carriers*, CC Docket 94-1, on behalf of Ad Hoc Telecommunications Users Committee, filed July 12, 1996.

Before the **State Corporation Commission of the State of Kansas**, in *Re: In the Matter of a General Investigation Into Competition Within the Telecommunications Industry in the State of Kansas*, 190, 492-U 94-GIMT-478-GIT, on behalf of Kansas Cable Telecommunications Association, Inc., filed June 14, 1996, cross-examination August 14, 1996.

Before the **Federal Communications Commission**, in *Re: In the Matter of Implementation of the Local Competition Provisions of Telecommunications Act of 1996*, CC Docket 96-98, filed May 1996.

Before the **Federal Communications Commission**, in *Re: Puerto Rico Telephone Company (Tariff FCC No. 1)*, Transmittal No. 1, on behalf of Centennial Cellular Corp., filed April 29, 1996.

Before the **United States District Court for the Eastern District of Tennessee at Greeneville**, in *Re: Richard R. Land, Individually and d/b/a The Outer Shell, and on behalf of all others similarly situated, Plaintiffs, vs. United Telephone-Southeast, Inc., Defendant*, CIV 2-93-55, filed December 7, 1996.

1995

Before the **Federal Communications Commission**, in *Re: Bentleyville Telephone Company Petition and Waiver of Sections 63.54 and 63.55 of the Commission's Rules and Application for Authority to Construct and Operate, Cable Television Facilities in its Telephone Service Area*, W-P-C-6817, on behalf of the Helicon Group, L.P. d/b/a Helicon Cablevision, filed November 2, 1995.

Before the **US District Court for the Eastern District of Tennessee**, in *Re: Richard R. Land, Individually and d/b/a The Outer Shell, and on behalf of all others similarly situated, Plaintiffs, vs. United Telephone-Southeast, Inc., Defendant*, 2-93-55, Class Action, filed June 12, 1995.

Before the **Connecticut Department of Public Utility Control**, in *Re: Application of SNET Company for approval to trial video dial tone transport and switching*, 95-03-10, on behalf of New England Cable TV Association, filed May 8, 1995, cross-examination May 12, 1995.

Before **Canadian Radio-Television and Telecommunications Commission**, in *Re: CRTC Order in Council 1994-1689*, Public Notice CRTC 1994-130 (Information Highway), filed March 10, 1995.

Before the **Federal Communications Commission**, in *Re: GTE Hawaii's Section 214 Application to provide Video Dialtone in Honolulu, Hawaii*, W-P-C- 6958, on behalf of Hawaii Cable TV Association, filed January 17, 1995 (Reply to Amended Applications).

Before the **Federal Communications Commission**, in *Re: GTE Hawaii's Section 214 Application to provide Video Dialtone in Ventura County*, W-P-C 6957, on behalf of the California Cable TV Association, filed January 17, 1995 (Reply to Amended Applications).

Before the **Federal Communications Commission**, in *Re: GTE Florida's Section 214 Application to Provide Video Dialtone in the Pinellas County and Pasco County, Florida areas*, W-P-C 6956, on behalf of Florida Cable TV Association, filed January 17, 1995 (Reply to Amended Applications).

Before the **Federal Communications Commission**, in *Re: GTE Virginia's Section 214 Application to provide Video Dialtone in the Manassas, Virginia area*, W-P-C 6956, on behalf of Virginia Cable TV Association, filed January 17, 1995 (Reply to Amended Applications).

1994

Before the **Federal Communications Commission**, in *Re: NET's Section 214 Application to provide Video Dialtone in Rhode Island and Massachusetts*, W-P-C 6982, W-P-C 6983, on behalf of New England Cable TV Association, filed December 22, 1994 (Reply to Supp. Responses).

Before the **State Corporation Commission of the State of Kansas**, in *Re: General Investigation into Competition*, 190, 492-U 94-GIMT-478-GIT, on behalf of Kansas CATV Association, filed November 14, 1994, cross-examination December 1, 1994.

Before the **Federal Communication Commission**, in *Re: Carolina Telephone's Section 214 Application to provide Video Dialtone in areas of North Carolina*, W-P-C 6999, on behalf of North Carolina Cable TV Association, filed October 20, 1994, reply November 8, 1994.

Before the **Federal Communication Commission**, in *Re: NET's Section 214 Application to provide Video Dialtone in Rhode Island and Massachusetts*, W-P-C 6982, W-P-C 6983, on behalf of New England Cable TV Association, filed September 8, 1994, reply October 3, 1994.

Before the **California Public Utilities Commission**, in *Re: Petition of GTE-California to Eliminate the Preapproval Requirement for Fiber Beyond the Feeder*, I.87-11-033, on behalf of California Bankers Clearing House, County of LA, filed August 24, 1994.

Before the **Federal Communications Commission**, in *Re: BellSouth Telecommunications Inc., Section 214 Application to provide Video Dialtone in Chamblee, GA and DeKalb County, GA*, W-P-C 6977, on behalf of Georgia Cable TV Association, filed August 5, 1994.

Before the **Federal Communications Commission**, in *Re: Bell Atlantic Telephone Companies Section 214 Application to provide Video Dialtone within their Telephone Services Areas*, W-P-C 6966, on behalf of Mid Atlantic Cable Coalition, filed July 28, 1994, reply August 22, 1994.

Before the **Federal Communication Commission**, in *Re: GTE Hawaii's 214 Application to provide Video Dialtone in Honolulu, Hawaii*, W-P-C 6958, on behalf of Hawaii Cable TV Association, filed July 1, 1994, and July 29, 1994.

Before the **Federal Communication Commission**, in *Re: GTE California's Section 214 Application to provide Video Dialtone in Ventura County*, W-P-C 6957, on behalf of California Cable TV Association, filed July 1, 1994, and July 29, 1994.

Before the **Federal Communication Commission**, in *Re: GTE Florida's 214 Application to provide Video Dialtone in the Pinellas and Pasco County, Florida areas*, W-P-C 6956, on behalf of Florida Cable TV Association, filed July 1, 1994, and July 29, 1994.

Before the **Federal Communication Commission**, in *Re: GTE Virginia's 214 Application to provide Video Dialtone in the Manassas, Virginia area*, W-P-C 6955, on behalf of the Virginia Cable TV Association, filed July 1, 1994, and July 29, 1994.

Before the **Federal Communications Commission**, in *Re: US WEST's Section 214 Application to provide Video Dialtone in Boise, Idaho and Salt Lake City, Utah*, W-P-C 6944-45, before the Idaho and Utah Cable TV Association, filed May 31, 1994.

Before the **Federal Communication Commission**, in *Re: US WEST's Section 214 Application to provide Video Dialtone in Portland, OR; Minneapolis, St. Paul, MN; and Denver, CO*, W-P-C 6919-22, on behalf of Minnesota & Oregon Cable TV Association, filed March 28, 1994.

Before the **Federal Communications Commission**, in *Re: Ameritech's Section 214 Application to provide Video Dialtone within areas in Illinois, Indiana, Michigan, Ohio, and Wisconsin*, W-P-C-6926-30, on behalf of Great Lakes Cable Coalition, filed March 10, 1994, reply April 4, 1994.

Before the **Federal Communications Commission**, in *Re: Pacific Bell's Section 214 Application to provide Video Dialtone in Los Angeles, Orange County, San Diego, and Southern San Francisco Bay areas*, W-P-C-6913-16, on behalf of Comcast/Cablevision Inc., filed February 11, 1994, reply March 11, 1994.

Before the **Federal Communications Commission**, in *Re: SNET's Section 214 Application to provide Video Dialtone in Connecticut*, W-P-C 6858, on behalf of New England Cable TV Association, filed January 20, 1994, reply February 23, 1994.

1993

Before the **Arkansas Public Service Commission**, in *Re: Earnings Review of Southwestern Bell Telephone Company*, 92-260-U, on behalf of Arkansas Press Association, filed September 2, 1993.

Before the **United States District Court for the Eastern District of Tennessee at Greenville**, in *Re: Cleo Stinnett, et al. Vs. BellSouth Telecommunications, Inc. d/b/a/ South Central Bell Telephone Company, Defendant*, Civil Action No 2-92-207, Class Action, cross-examination May 10, 1993, and February 10, 1994.

Before the **Federal Communications Commission**, in *Re: NJ Bell's Section 214 Application to provide Video Dialtone service within Dover Township, and Ocean County, New Jersey, W-P-C-6840*, on behalf of New Jersey Cable TV Association, filed January 21, 1993.

1992

Before the **New Jersey Board of Regulatory Commissioners**, in *Re: NJ Bell Alternative Regulation, T092030358*, on behalf of NJ Cable TV Association, filed September 21, 1992.

Before the **New Hampshire Public Utilities Commission**, in *Re: Generic competition docket, DR 90-002*, on behalf of Office of the Consumer Advocate, filed May 1, 1992, reply July 10, 1992, Surrebuttal August 21, 1992.

Before the **New Jersey General assembly Transportation, Telecommunications, and Technology Committee**, *Concerning A-5063*, on behalf of NJ Cable TV Association, filed January 6, 1992.

1991

Before the **New Jersey Senate Transportation and Public Utilities Committee**, in *Re: Concerning Senate Bill S-3617*, on behalf of New Jersey Cable Television Association, filed December 10, 1991.

Before the **119th Ohio General Assembly Senate Select Committee on Telecommunications Infrastructure and Technology**, in *Re: Issues Surrounding Telecommunications Network Modernization*, on behalf of the Ohio Cable TV Association, filed March 7, 1991.

Before the **Tennessee Public Service Commission**, in *Re: Master Plan Development and TN Regulatory Reform Plan*, on behalf of TN Cable TV Association, filed February 20, 1991.

1990

Before the **Tennessee Public Service Commission**, in *Re: Earnings Investigation of South Central Bell, 90-05953*, on behalf of the TN Cable Television Association, filed September 28, 1990.

Before the **New York Public Service Commission**, in *Re: NYT Rates, 90-C-0191*, on behalf of User Parties NY Clearing House Association, filed July 13, 1990, Surrebuttal July 30, 1990.

Before the **Louisiana Public Service Commission**, in *Re: South Central Bell Bidirectional Usage Rate Service, U-18656*, on behalf of Answerphone of New Orleans, Inc., Executive Services, Inc., King Telephone Answering Service, et al, filed January 11, 1990.

1989

Before the **Georgia Public Service Commission**, in *Re: Southern Bell Tariff Revision and Bidirectional Usage Rate Service, 3896-U*, on behalf of Atlanta Journal Const./Voice Information Services Company, Inc., GA Association of Telemessaging Services, Prodigy Services, Company, Telnet Communications, Corp., filed November 28, 1989.

Before the **New York State Public Service Commission**, in *Re: NYT Co. - Rate Moratorium Extension - Fifth Stage Filing, 28961 Fifth Stage*, on behalf of User Parties NY Clearing House Association Committee of Corporate Telecommunication Users, filed October 16, 1989.

Before the **Delaware Public Service Commission**, in *Re: Diamond State Telephone Co. Rate Case, 86-20*, on behalf of DE PSC, filed June 16, 1989.

Before the **Arizona Corporation Committee**, in *Re: General Rate Case, 86-20*, on behalf of Arizona Corporation Committee, filed March 6, 1989.

1988

Before **New York State Public Service Commission**, in *Re: NYT Rate Moratorium Extension*, 28961, on behalf of Capital Cities/ ABC, Inc., AMEX Co., CBS, Inc., NBC, Inc., filed December 23, 1988.

1989

Before **Rhode Island Public Utilities Commission**, in *Re: New England Telephone*, 1475, on behalf of RI Bankers Association, filed August 11, 1987, cross-examination August 21, 1987.

Before the **New York State Public Service Commission**, in *Re: General Rate Case Subject to Competition*, 29469, on behalf of AMEX Co., Capital Cities/ ABNC, Inc., NBC, Inc., filed April 17, 1987, cross-examination May 20, 1987.

Before the **Minnesota Public Utilities Commission**, in *Re: Northwestern Bell*, P-421/ M-86-508, on behalf of MN Bus. Utilities Users Counsel, filed February 10, 1987, cross-examination March 5, 1987.

1986

Before the **Kansas Public Utilities Commission**, in *Re: Southwestern Bell*, 127, 140-U, on behalf of Boeing Military, et al., filed August 15, 1986.

1985

Before the **Washington Utilities and Transportation Commission**, in *Re: Cost of Service Issues bearing on the Regulation of Telecommunications Company*, on behalf of US Department of Energy, filed November 18, 1985 (Reply Comments).

1984

Before the **Maine Public Utilities Commission**, in *Re: New England Telephone*, 83-213, on behalf of Staff, ME PUC, filed February 7, 1984, cross-examination March 16, 1984.

Before the **Minnesota Public Service Commission**, in *Re: South Central Bell*, U-4415, on behalf of MS PSC, filed January 24, 1984, cross-examination February 1984.

1983

Before the **Kentucky Public Service Commission**, in *Re: South Central Bell*, 8847, on behalf of KY PSC, filed November 28, 1983, cross-examination December 1983.

Before the **Florida Public Service Commission**, in *Re: Southern Bell Rate Case*, 820294-TP, on behalf of Florida Department of General Services, FL Ad Hoc Telecommunications Users, filed March 21, 1983, cross-examination May 5, 1983.

1982

Before the **Maine Public Utilities Commission**, in *Re: New England Telephone*, 82-142, on behalf of Staff, ME PUC, filed November 15, 1982, cross-examination December 9, 1982.

Before the **Kentucky Public Service Commission**, in *Re: South Central Bell*, 8467, on behalf of the Commonwealth of Kentucky, cross-examination August 26, 1982.

**CALCULATION OF MAXIMUM CABLE POLE
ATTACHMENT RATE
Ohio Power Company**

PDK Attachment 2

Calculation	For 12 mo ending 5/21/11
Net Investment Per Bare Pole	
Investment in Pole Plant	\$325,702,514
-Depreciation Reserve for Poles	\$106,626,795
-Accumulated Deferred Taxes	\$35,232,012
Net Investment in Pole Plant	\$183,843,707
-Net Investment in Appurtenances	\$27,576,556
Net Investment in Bare Pole Plant	\$156,267,151
/Number of Poles--Equivalent	652,347
Net Investment per Bare Pole	\$239.55

Carrying Charges

Maintenance	
Maintenance Expenses - 593	\$37,029,970
Net Investment in 364,365,369	\$419,069,358
=Maintenance Carrying Charge	8.84%

Depreciation

Annual Depreciation Rate for Poles	3.77%
Gross Investment in Pole Plant	\$325,702,514
/Net Investment in Pole Plant	\$183,843,707
Gross/Net Adjustment	177.16%
Deprec Rate Applied to Net Pole Plant	6.68%

Administrative	
Administrative Expenses	\$35,389,025
Total Plant--Distrib	\$1,599,363,171
-Depreciation Reserve--Distrib	\$523,591,196
-Accumulated Deferred Taxes--Distrib	\$173,006,901
Net Plant in Service	\$902,765,074
Administrative Carrying Charge	3.92%

Taxes	
Tax Expense	\$44,368,293
Total Plant--Distrib	\$1,599,363,171
-Depreciation Reserve--Distrib	\$523,591,196
-Accumulated Deferred Taxes--Distrib	\$173,006,901
Net Plant in Service	\$902,765,074
Tax Carrying Charge	4.91%

Return	
Return	7.33%

Total Carrying Charges	31.68%
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Allocation of Annual Carrying Costs

Space Occupied by Cable	1
/Total Useable Space	13.5
Charge Factor	7.41%

Maximum Rate

Investment Per Bare Pole	\$239.55
*Carrying Charges	31.68%
*Charge Factor	7.41%
=MAXIMUM RATE SOLE POLE	\$5.62

DATA ENTRY AND SOURCE

Gross Investment in Distribution Plant	\$1,599,363,171 COS, Ex. TAC-2,pg.7, ln 16
Accumulated Depreciation--Distribution	\$523,591,196 COS, Ex. TAC-2,pg.8, ln 10
Accumulated Deferred Taxes 190 (Distrib)	\$44,156,926 COS, Ex. TAC-1,pg.9, ln 5
Accumulated Deferred Taxes 281 (Distrib)	\$0 COS, Ex. TAC-1,pg.9, ln 6
Accumulated Deferred Taxes 282 (Distrib)	\$151,532,561 COS, Ex. TAC-1,pg.9, ln 7
Accumulated Deferred Taxes 283 (Distrib)	\$65,631,266 COS, Ex. TAC-1,pg.9, ln 8-9
Accumulated Deferred Taxes-Total (Distrib)	\$173,006,901 (sum)
Gross Investment in 364	\$325,702,514 COS, Ex. TAC-2,pg.7, ln 6
Gross Investment in 365	\$281,574,210 COS, Ex. TAC-2,pg.7, ln 7
Gross Investment in 369	\$135,157,954 COS, Ex. TAC-2,pg.7, ln 11
Sum	\$742,434,678 sum
Depreciation Reserve for 364 (prorated)	\$106,626,795 prorated based on ratio 364/distrib plant
Depreciation Reserve for 365 (prorated)	\$92,180,300 prorated based on ratio 365/distrib plant
Depreciation Reserve for 369 (prorated)	\$44,247,308 prorated based on ratio 369/distrib plant
Total Depreciation Reserve Overhead Accts	\$243,054,403 sum
Accumulated Deferred Taxes 364 (prorated)	\$35,232,012 prorated
Accumulated Deferred Taxes 365 (prorated)	\$30,458,549 prorated
Accumulated Deferred Taxes 369 (prorated)	\$14,620,356 prorated
Total Accumulated Deferred Taxes Ovhd Accts	\$80,310,917 sum
Maintenance Overhead Lines Expense 593	\$37,029,970 COS, Ex. TAC-1,pg.13 ln 18-19
Total Administrative Expenses	\$35,389,025 COS, Ex. TAC-2,pg.13 ln 54

Taxes 408.1 Other than Income	\$64,487,954	COS, Ex. TAC-2,pg.5, ln 15
Taxes 409.1 Federal Income	-\$4,081,145	COS, Ex. TAC-2,pg.5, ln 23
Taxes 409.1 Other Income	-\$181,269	COS, Ex. TAC-2,pg.5, ln 19
Taxes 410.1 Deferred	\$122,230	COS, Ex. TAC-2,pg.5, ln 20
Taxes 411.1 Deferred - Credit	\$15,979,477	COS, Ex. TAC-2,pg.5, ln 24
Taxes 411.4 Inv Tax Credit	\$0	COS, Ex. TAC-2,pg.5, ln 25
Total Normalized Taxes (Electric)	\$44,368,293	sum
Depreciation Rate for Poles	3.77%	Avg Distrib Plant, Ex. DAD-2,Sch.1;p.16
Rate of Return (Placeholder PUCo Auth. ROR)	7.33%	Staff Proposed ROR
Number of Poles	652,347	Co. records, Ex AEM-3

**CALCULATION OF MAXIMUM CABLE POLE
ATTACHMENT RATE**

PDK Attachment 2

Columbus Southern Power Company

Calculation

For 12 mo. ending 5/31/11

Net Investment Per Bare Pole	
Investment in Pole Plant	\$230,957,605
-Depreciation Reserve for Poles	\$96,156,027
-Accumulated Deferred Taxes	\$28,539,429
Net Investment in Pole Plant	\$106,262,149
-Net Investment in Appurtenances	\$15,939,322
Net Investment in Bare Pole Plant	\$90,322,827
/Number of Poles--Equivalent	334,613
Net Investment per Bare Pole	\$269.93

Carrying Charges

Maintenance	
Maintenance Expenses - 593	\$25,592,038
Net Investment in 364,365,369	\$275,096,045
=Maintenance Carrying Charge	9.30%

Depreciation

Annual Depreciation Rate for Poles	3.01%
Gross Investment in Pole Plant	\$230,957,605
/Net Investment in Pole Plant	\$106,262,149
Gross/Net Adjustment	217.35%
Deprec Rate Applied to Net Pole Plant	6.54%

Administrative	
Administrative Expenses	\$38,922,727
Total Plant--Distrib	\$1,749,713,592
-Depreciation Reserve--Distrib	\$728,469,226
-Accumulated Deferred Taxes--Distrib	\$216,212,091
Net Plant in Service	\$805,032,275
Administrative Carrying Charge	4.83%

Taxes	
Tax Expense	\$77,471,242
Total Plant--Distrib	\$1,749,713,592
-Depreciation Reserve--Distrib	\$728,469,226
-Accumulated Deferred Taxes--Distrib	\$216,212,091
Net Plant in Service	\$805,032,275
Tax Carrying Charge	9.62%

Return	
Return	7.27%

Total Carrying Charges	37.57%
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Allocation of Annual Carrying Costs

Space Occupied by Cable	1
Total Useable Space	13.5
Charge Factor	7.41%

Maximum Rate

Investment Per Bare Pole	\$269.93
*Carrying Charges	37.57%
*Charge Factor	7.41%
=MAXIMUM RATE SOLE POLE	\$7.51

DATA ENTRY AND SOURCE

Gross Investment in Distribution Plant	\$1,749,713,592 COS, Ex. TAC-1,pg.7, ln 16
Accumulated Depreciation--Distribution	\$728,469,226 COS, Ex. TAC-1,pg.8, ln 10
Accumulated Deferred Taxes 190 (Distrib)	\$39,446,633 COS, Ex. TAC-1,pg.9, ln 5
Accumulated Deferred Taxes 281 (Distrib)	\$0 COS, Ex. TAC-1,pg.9, ln 6
Accumulated Deferred Taxes 282 (Distrib)	\$176,794,800 COS, Ex. TAC-1,pg.9, ln 7
Accumulated Deferred Taxes 283 (Distrib)	\$78,863,924 COS, Ex. TAC-1,pg.9, ln 8-9
Accumulated Deferred Taxes-Total (Distrib)	\$216,212,091 (sum)
Gross Investment in 364	\$230,957,605 COS, Ex. TAC-1,pg.7, ln 6
Gross Investment in 365	\$230,847,465 COS, Ex. TAC-1,pg.7, ln 7
Gross Investment in 369	\$136,107,963 COS, Ex. TAC-1,pg.7, ln 11
Sum	\$597,913,033 sum
Depreciation Reserve for 364 (prorated)	\$96,156,027 prorated based on ratio 364/distrib plant
Depreciation Reserve for 365 (prorated)	\$96,110,172 prorated based on ratio 365/distrib plant
Depreciation Reserve for 369 (prorated)	\$56,666,681 prorated based on ratio 369/distrib plant
Total Depreciation Reserve Overhead Accts	\$248,932,880 sum
Accumulated Deferred Taxes 364 (prorated)	\$28,539,429 prorated
Accumulated Deferred Taxes 365 (prorated)	\$28,525,819 prorated
Accumulated Deferred Taxes 369 (prorated)	\$16,818,860 prorated
Total Accumulated Deferred Taxes Ovhd Accts	\$73,884,107 sum
Maintenance Overhead Lines Expense 593	\$25,592,038 COS, Ex. TAC-1,pg.13 ln 18-19
Total Administrative Expenses	\$38,922,727 COS, Ex. TAC-1,pg.14 ln 43

Taxes 408.1 Other than Income
Taxes 409.1 Federal Income
Taxes 409.1 Other Income
Taxes 410.1 Deferred
Taxes 411.1 Deferred - Credit
Taxes 411.4 Inv Tax Credit
Total Normalized Taxes (Electric)

\$80,713,806 COS, Ex. TAC-1,pg.16 ln 11
\$8,204,507 COS, Ex. TAC-1,pg.16 ln 2
\$257,792 COS, Ex. TAC-1,pg.16 ln 1
\$154,040 COS, Ex. TAC-1,pg.16 ln 2
\$11,642,743 COS, Ex. TAC-1,pg.16 ln 3
-\$216,160 COS, Ex. TAC-1,pg.16 ln 4
\$77,471,242 sum

Depreciation Rate for Poles

3.01% Avg Distrib Plant, Ex. DAD-1,Sch.1,p.13

Rate of Return (Placeholder PUCo Auth. ROR)

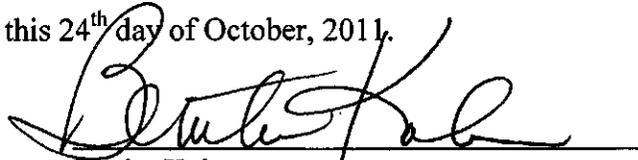
7.27% Staff Proposed ROR

Number of Poles

334,613 Co. records, Ex AEM-3

CERTIFICATE OF SERVICE

I hereby certify that a true and accurate copy of the foregoing document was served upon the following persons via email this 24th day of October, 2011.



Benita Kahn

John W. Bentine
Mark S. Yurick
Zachary D. Kravitz
Chester Willcox & Saxbe, LLP
65 East State Street, Suite 1000
Columbus, Ohio 43215
jbentine@cwslaw.com
myurick@cwslaw.com
zkravitz@cwslaw.com

Maureen R. Grady
Jeff Small
Richard C. Reese
Office of the Ohio Consumers' Counsel
10 West Broad Street, Suite 1800
Columbus, Ohio 43215-3485
grady@occ.state.oh.us
small@occ.state.oh.us
reese@occ.state.oh.us

Henry W. Eckhart
The Natural Resources Defense Council
50 West Broad Street, #2117
Columbus, Ohio 43215
henryeckhart@aol.com

Richard L. Sites
Ohio Hospital Association
155 East Broad Street, 15th Floor
Columbus, Ohio 43215-3620
ricks@ohanet.org

David F. Boehm
Michael L. Kurtz
Boehm, Kurtz & Lowry
36 East Seventh Street, Suite 1510
Cincinnati, Ohio 45202
dboehm@bkUawfirm.com
mkurtz@bkllawfirm.com

Lisa G. McAlister
Matthew W. Wamock
Bricker & Eckler LLP
100 South Third Street
Columbus, Ohio 43215-4291
lmcalister@bricker.com
mwamock@bricker.com

Thomas J. O'Brien
Bricker & Eckler LLP
100 South Third Street
Columbus, Ohio 43215-4291
tobrien@bricker.com

Colleen L. Mooney
Ohio Partners for Affordable Energy
231 West Lima Street
Findlay, Ohio 45840
cmooney2@columbus.rr.com

Steven T. Nourse
Matthew J. Satterwhite
American Electric Power Corp.
1 Riverside Plaza, 29th Floor
Columbus, Ohio 43215
stnourse@aep.com
mjsatterwhite@aep.com

Barth Royer
Bell & Royer Co LPA
33 South Grant Avenue
Columbus, OH 43215-3927
barthroyer@aol.com

Mark A. Hayden
FirstEnergy Service Company
76 South Main Street
Akron, OH 44308
havdenm@firstenergycorp.com

James F. Lang
Laura C. McBride
N. Trevor Alexander
Calfee, Halter & Griswold LLP
1400 KeyBank Center
800 Superior Ave.
Cleveland, OH 44114
ilang@calfee.com
lmcbride@calfee.com
tallexander@calfee.com

Katie Burke
Gardner Gillespie
Hogan Lovells US LLP
Columbia Square
555 Thirteenth Street, NW
Washington DC 20004
gardner.gillespie@hoganlovells.com

Michael R. Smalz
Joseph V. Maskovyak
Ohio Poverty Law Center
555 Buttles Avenue
Columbus, Ohio 43215
msmalz@ohiopoveritylaw.org
jmaskovyak@ohiopoveritylaw.org

Daniel R. Conway
Porter Wright Morris & Arthur
41 South High Street
Columbus, Ohio 43215
dconway@porterwright.com

Christopher Allwein
Williams and Moser
1373 Grandview Ave., Suite 212
Columbus, OH 43212
callwein@williamsandmoser.com

Samuel C. Randazzo
Joseph E. Olikier
Frank P. Dart
McNees Wallace & Nurick
21 East State Street, 17th Floor
Columbus, Ohio 43215
sam@mwncmh.com
joliker@mwncnih.com
fdart@mwncmh.com

Clinton A. Vince
Douglas G. Bonner
Daniel D. Bamowski
Emma F. Hand
Keith C. Nusbaum
SNR Denton US LLP
1301 K Street NW
Suite 600, East Tower
Washington, DC 20005
clinton.vince@snrdenton.com
doug.bonner@snrdenton.com
dan.bamowski@snrdenton.com
emma.hand@snrdenton.com
keith.nusbaum@snrdenton.com