

**COMMONWEALTH OF KENTUCKY
BEFORE THE KENTUCKY PUBLIC SERVICE COMMISSION**

In the Matter of:

ELECTRONIC APPLICATION OF KENTUCKY)
POWER COMPANY FOR (1) A GENERAL)
ADJUSTMENT OF ITS RATES FOR ELECTRIC)
SERVICE; (2) AN ORDER APPROVING ITS)
2017 ENVIRONMENTAL COMPLIANCE PLAN;))
(3) AN ORDER APPROVING ITS TARIFFS AND))
RIDERS; (4) AN ORDER APPROVING)
ACCOUNTING PRACTICES TO ESTABLISH)
REGULATORY ASSETS AND LIABILITIES;)
AND (5) AN ORDER GRANTING ALL OTHER)
REQUIRED APPROVALS AND RELIEF)

Case No.
2017-00179

DIRECT TESTIMONY

OF

PATRICIA D. KRAVTIN

Submitted on

Behalf of

The Kentucky Cable Telecommunications Association

October 3, 2017

1 **Q: PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND**
2 **OCCUPATION.**

3 A: My name is Patricia D. Kravtin. My business address is 500 Atlantic Avenue,
4 Boston, Massachusetts. I am an economist in private practice specializing in the
5 analysis of communications and energy regulation and markets.

6 **Q: PLEASE SUMMARIZE YOUR EDUCATIONAL AND PROFESSIONAL**
7 **BACKGROUND.**

8 A: I received a B.A. with Distinction in Economics from the George Washington
9 University. I studied in the Ph.D. program in Economics under a National
10 Science Foundation Fellowship at the Massachusetts Institute of Technology
11 (“M.I.T.”). My fields of concentration at M.I.T. were government regulation of
12 industry, industrial organization, and urban and regional economics. My
13 professional background includes a wide range of consulting experiences in
14 regulated industries. Between 1982 and 2000, I was a consultant at the national
15 economic research and consulting firm of Economics and Technology, Inc. (ETI)
16 in that firm’s regulatory consulting group, where I held positions of increasing
17 responsibility, including Senior Vice President/Senior Economist. Upon leaving
18 ETI in September 2000, I began my own consulting practice specializing in
19 telecommunications, cable, and energy regulation and markets. A detailed
20 resume summarizing my training, previous experience, and prior testimony and
21 reports is provided as Exhibit PDK-1 to this testimony.

22 **Q: PLEASE DESCRIBE YOUR EXPERIENCE OF PARTICULAR**
23 **RELEVANCE TO THIS PROCEEDING.**

24 A. Over the course of my career, I have been actively involved in a number of state
25 and federal regulatory commission proceedings involving rates charged by

1 utilities in exchange for access to poles, ducts, conduits, and rights-of-way. Many
2 of the proceedings in which I have served as an expert have involved the
3 calculation of just and reasonable pole attachment rental rates. Through the
4 course of my involvement in these proceedings, I have substantial experience in
5 applying regulated rate formulas.

6 I have served as an expert on pole attachment matters in proceedings involving
7 investor-owned electric utilities (“IOUs”), non-profit consumer-owned utilities
8 (cooperatives or “Coops”), municipally owned utilities, as well as incumbent local
9 exchange carriers (“ILECs”). I have testified before various state (and provincial)
10 regulatory commissions including the North Carolina Utilities Commission,
11 Connecticut Department of Public Utility Control, New Hampshire Public
12 Utilities Commission, Kentucky Public Service Commission, the Arkansas Public
13 Service Commission, the Public Utilities Commission of Texas, the New Jersey
14 Board of Public Utilities, the Virginia Corporation Commission, the Ohio Public
15 Utilities Commission, the Massachusetts Department of Telecommunications and
16 Cable, the Wisconsin Public Service Commission, the Georgia Public Service
17 Commission, the South Carolina Public Service Commission, the Public Service
18 Commission of the District of Columbia, the New York Public Service
19 Commission and the Ontario Energy Board. I have also testified on these and
20 related matters before state and federal courts in Maryland, Florida, New York,
21 California, Tennessee, Washington, and North Carolina.

22 In addition, I have submitted reports on pole attachment rates, terms and
23 conditions in numerous proceedings before the Federal Communications
24 Commission (“FCC”), including its seminal 2010 pole rulemaking proceedings,

1 *Implementation of Section 224 of the Act; A National Broadband Plan for our*
2 *Future*, as well as its 2007 predecessor.¹

3 I have been actively involved in the area of broadband deployment, having
4 testified extensively on the matter. In addition to having authored a number of
5 reports on the subject, I participated as a grant reviewer for the Broadband
6 Technology Opportunities Program (“BTOP”) administered by the National
7 Telecommunications and Information Administration (“NTIA”).

8 **Q: HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION?**

9 A: Yes, I submitted written testimony before the Kentucky Public Service
10 Commission (“KPSC” or “Commission”) on pole attachment matters in the 2014-
11 2015 and 2009-2010 Kentucky Utilities (“KU”) and Louisville Gas & Electric
12 (“LG&E”) rate cases, Case Nos. 2014-00371, 2014-00372, 2009-00548 and 2009-
13 00549. In addition, I submitted written testimony and testified at a hearing in
14 connection with two South Central Bell Telephone Company rate cases, Case No.
15 8847 (1984) and Case No. 8467 (1982), on behalf of the KPSC staff and the
16 Commonwealth of Kentucky, respectively.

17 **Q: WHY HAS THE KENTUCKY CABLE TELECOMMUNICATIONS**
18 **ASSOCIATION ASKED YOU TO PRESENT TESTIMONY IN THIS**
19 **PROCEEDING?**

20 A: I was asked by the Kentucky Cable Telecommunications Association (KCTA) to
21 address the pole attachments rates Kentucky Power Company (“KPCO” or

¹ See *Implementation of Section 224 of the Act; A National Broadband Plan for Our Future*, WC Docket No. 07-245, Order & Further Notice of Proposed Rulemaking, 25 FCC Rcd 11864 (2010); *Implementation of Section 224 of the Act; Amendment of the Commission’s Rules and Policies Governing Pole Attachments*, WC Docket No. 07-245, Notice of Proposed Rulemaking, 22 FCC Rcd 20195 (2007).

1 “Company”) is proposing to charge cable operators in this proceeding and to
2 provide recommendations regarding fair, just and reasonable pole attachment
3 rental rates applicable to KPCO. I have based my testimony on the formula
4 methodology for calculating cable attachment charges established by the KPSC in
5 Administrative Case No. 251,² and in subsequent KPSC rulings addressing the
6 application of its pole rate formula.

7 **Q: PLEASE SUMMARIZE YOUR TESTIMONY.**

8 A. KPCO is proposing to increase the annual recurring pole attachment rates³ it
9 charges cable operators from the current rates of \$7.21 for attachments on two-
10 user poles and \$4.47 for attachments on three-user poles to \$11.97 and \$7.42,
11 respectively – representing across the board increases of 66%. KPCO’s pole
12 attachment rates have not changed since 2006, and utility costs generally have
13 increased over time. That said, the Company’s proposed 66% across the board
14 rate increases for pole attachments are unfair, unjust and unreasonable pursuant to
15 the cost-based standard established under the KPSC pole rate methodology and
16 far exceed objective measures of pole cost changes from 2006 to the present.

17 The Company’s proposed attachment rates are not calculated consistent with the
18 KPSC’s cost-based methodology. Specifically, KPCO’s underlying net bare pole
19 costs – one of the three components of the KPSC pole formula – are not based on
20 the KPSC’s prescribed weighted average per unit costs of 35, 40, and 45-foot

² *In the Matter of the Adoption of a Standard Methodology for Establishing Rates for CATV Pole Attachments*, Administrative Case No. 251, Amended Order (Admin. Case No. 251), Kentucky Public Service Commission, September 17, 1982.

³ Cable operators are subject to additional non-recurring charges in the form of make-ready and other direct reimbursement fees to cover any and all out of pocket costs incurred by KPCO in connection with hosting the attachments of a specific CATV operator or communications provider.

1 poles. Moreover, the Company is unable to make the prescribed calculations due
2 to inherent limitations in its pole plant recordkeeping system. According to
3 KPCO's responses to KCTA data requests, "Kentucky Power's utility pole
4 property records are not maintained by height of pole."⁴ KPCO's net bare pole
5 cost component for both two and three user poles are instead calculated based on
6 aggregate Account 364 pole costs and quantities.

7 Aside from not following the prescribed KPSC formula to use a weighted average
8 cost of poles of specified heights, KPCO also erroneously applies the KPSC's
9 height-specific space allocation factors to the aggregate cost amounts. KPCO's
10 inconsistent application of the KPSC methodology produces economically
11 distorted costs, and in particular costs (and accordingly rates) that are overstated
12 for attachments on two-user poles. While the cost distortion arising from KPCO's
13 misapplication of the KPSC methodology is also embodied in current rates,⁵ the
14 harmful impact of the cost distortion on competition and end user customers of
15 broadband services (including the utility's own ratepayers) would be magnified
16 today, because KPCO's base cost levels are higher and there is an ever-increasing
17 importance of broadband services on the public health, safety, and overall
18 economic and social welfare of Kentuckians. This is especially the case in more
19 rural, less dense areas of the state.

20 The Company's proposed 66% across the board increase is also unjust and
21 unreasonable in comparison to objective benchmarks of utility pole cost inflation

⁴ See KPCO Responses to KCTA_2_017, 2_018, 2_019, 2_020, and 2_021, reproduced in Exhibit PDK-2.

⁵ It is my understanding those rates were adopted under settlement with no explicit finding as to those rates' adherence to the KPSC cost methodology.

1 over the relevant 2006-2016 period, as measured by the widely used Handy
2 Whitman Index (“HWI”). Over this same period, the HWI cost index for Public
3 Utility Construction for the South Atlantic region applicable to Account 364 pole
4 plant increased by approximately 23% - about a third of the increase sought by the
5 Company. Applying the change in the HWI to the Company’s 2006 rates
6 demonstrates that the Company’s proposed rates are excessive and provides an
7 objective benchmark for what a just and reasonable cost-based rate should be.
8 Moreover, allowing increases of this magnitude violate the longstanding utility
9 ratemaking principles of rate continuity and avoidance of rate shock.

10 To correct these identified problems with KPCO’s proposed pole costs, I
11 recommend the KPSC adopt a unified composite two and three user pole
12 attachment rate of **\$7.42** per foot of attachment, rather than two separate rates.
13 My recommended rate of \$7.42 is based on KPCO’s own calculations from its
14 2016 annual pole costs (aggregate Account 364 net bare per pole cost multiplied
15 by annual carrying charges) allocated to communications attachers on the basis of
16 KPSC’s three user attachment space allocator factor of **7.59%**. The three-user
17 space allocation factor is close to the 7.41% space factor used for attachment rates
18 regulated by the Federal Communications Commission (“FCC”) and the majority
19 of states that, like Kentucky, have certified to regulate pole attachments. My
20 recommended unified rate of \$7.42 is also in line with the \$7.25 rate I understand
21 was adopted by the KPSC in a recent settlement agreement for KPCO’s peer
22 Kentucky Utilities, KU and LGE.⁶

⁶ See Attached KU/LGE Tariff pages, reproduced in Exhibit PDK-3.

1 A composite rate of \$7.42 is fair, just and reasonable and allows KPCO to raise
2 pole attachment rates by an escalation (inflation) level consistent with the change
3 in the HWI for utility pole construction in the South Atlantic region for the 2006 –
4 2016 period. Indeed, when you apply the 23% change in the HWI to the weighted
5 average of the current two and three user rates, it produces a unified pole
6 attachment rate for KPCO of \$6.98, which is lower than my recommended rate of
7 \$7.42. Using the objective HWI benchmark of pole cost inflation, a unified rate
8 of \$6.98 would, in my opinion, also be compensatory to the utility.

9 **Q: WHAT IS THE PURPOSE OF POLE RATE REGULATION?**

10 A: The primary purpose of pole rate regulation historically has been, and continues
11 to be, about protecting cable operators and other third-party attachers against
12 monopoly abuses of pole-owning utilities. The need for effective pole regulation
13 arose because cable operators and other third-parties had no practical alternative
14 to serve their customers but to attach to existing pole lines. This condition is as
15 relevant today as it was decades ago, if not more so given the increasing
16 importance of broadband service availability and accessibility. In the absence of
17 effective pole regulation, pole-owning utilities, because of their historical
18 incumbency, would be in a position to limit access to these essential bottleneck
19 facilities and/or to extract excessive monopoly rents. Moreover, without effective
20 regulation, a utility's monopoly control over poles makes it a gatekeeper
21 controlling the availability of new advanced broadband services and applications
22 in its service area. This scenario is precisely the type of behavior that pole
23 regulation, nationally, and here in Kentucky following the state's certification to
24 self-regulate pursuant to Administrative Case No. 251, was designed to address.

1 **Q: ARE THERE PUBLIC POLICY REASONS FOR PREVENTING**
2 **UTILITIES FROM CHARGING EXCESSIVE RATES?**

3 A: Yes. Excessive rates serve no valid economic or public policy purpose. To the
4 contrary, excessive rates work at cross purposes to the widely held public policy
5 goals to promote effective competition and widespread broadband deployment.
6 This is particularly the case in rural and less-populated areas, where the economic
7 conditions for broadband deployment (e.g., lower population densities resulting in
8 higher construction costs per capita) are the most unfavorable.⁷

9 **Q: PLEASE DESCRIBE THE KPSC FORMULA METHODOLOGY.**

10 A: In Administrative Case No. 251, the KPSC established a uniform pole rate
11 formula designed to “produce a fair, just and reasonable rate, based on the fully
12 allocated costs of the utility in furnishing pole attachment services.”⁸ Consistent
13 with the widely accepted Cable Formula used by the FCC and the vast majority of
14 states that regulate pole attachments, the KPSC formula is based on the
15 straightforward multiplication of the following three basic components: (1)
16 embedded cost of an average bare pole; (2) an annual carrying charge factor; and
17 (3) a space allocation factor. Under the KPSC formula, the first and third cost
18 components are further refined as detailed below to reflect the embedded cost of
19 an average bare pole of the type and size which is or deemed more likely used for
20 the provision of a CATV attachment. Specifically, the average per bare pole cost

⁷ These are all points emphasized in the FCC’s seminal National Broadband Plan, which recommends rates for pole attachments be set as low and as close to uniform (in the vicinity of the current cable rate) as possible to support the goal of broadband deployment, particularly in rural areas where the “impact of these rates can be particularly acute.” See *Connecting America: The National Broadband Plan*, March 16, 2010, at 110. <http://www.broadband.gov/plan/#read-the-plan>.

⁸See Admin. Case No. 251 at 8.

1 is based on the weighted average per unit cost of two and three-user poles as
2 defined in Administrative Case No. 251 multiplied by space allocation factors
3 specific to two and three-user poles. In Administrative Case No. 251, and in
4 subsequent rulings addressing its pole rate formula, the KPSC identified with
5 specificity the manner in which these basic components are to be calculated.

6 **Q: PLEASE DESCRIBE HOW THE FIRST COMPONENT OF THE**
7 **FORMULA, THE EMBEDDED COST OF AN AVERAGE BARE POLE, IS**
8 **CALCULATED FOR ELECTRIC UTILITIES UNDER THE KPSC**
9 **FORMULA METHODOLOGY.**

10 A: Under the KPSC methodology, the average bare pole cost is based on the
11 “weighted average cost of two-user and three-user poles...For electric utilities,
12 the average cost of a two-user pole will be assumed to be the weighted average
13 cost of 35-foot and 40-foot poles, and for a three-user pole, the weighted average
14 cost of 40-foot and 45-foot poles.”⁹ The KPSC’s methodology excludes from the
15 calculation the costs for poles with heights lower or higher than this range
16 because the KPSC found them to be used so infrequently for cable attachments.¹⁰

17 In addition, the KPSC’s methodology specifically excludes costs associated with
18 appurtenances not installed for CATV purposes.¹¹ The KPSC methodology
19 distinguishes between two types of appurtenances – major and minor – as follows:
20 Costs associated with major appurtenances, such as cross arms, which “can be
21 specifically identified in sub-accounts of the Federal Energy Regulatory

⁹ See Admin. Case No. 251 at 10-11.

¹⁰ *Id.* at 9.

¹¹ *Id.*

1 Commission (“FERC”) Form 1, Account 364” to be directly excluded from the
2 bare pole cost calculation.¹² Costs associated with minor appurtenances,
3 consisting of miscellaneous hardware (e.g., aerial cable clamps and pole top pins),
4 not segregated in separate FERC pole accounts and not specifically tracked by the
5 Company, are excluded by applying a 15% investment percentage factor to the
6 bare pole cost (net of major appurtenances).¹³

7 **Q: PLEASE DESCRIBE THE SECOND COMPONENT OF THE KPSC**
8 **FORMULA, THE ANNUAL CARRYING CHARGE FACTOR, AND HOW**
9 **IT IS APPLIED.**

10 A: The annual carrying charge factor (CCF) is “designed to recover the utility’s cost
11 in providing service,” including items “represent[ing] an equitable share of all
12 operating and maintenance expenses, taxes, and depreciation, and a cost of money
13 component,” and a “contribution by CATV toward the common costs of the
14 utility.”¹⁴ The Commission specified that the cost of money factor “should be
15 equal to the return on investment (or margin) allowed in the utility’s last rate
16 case.”¹⁵ The Commission further specified that “[t]he costs included in the annual
17 carrying charge calculation should be identifiable by specific account number as
18 established in the Uniform System of Accounts prescribed by this Commission

¹² *Id.* at 9, Appendix A at 5.

¹³ *See* Admin. Case No. 251, at 9-10, Appendix A at 4-5. *See also In the Matter of Application of Jackson Purchase Energy Corporation for Adjustments in Existing Cable Television Attachment Tariff*, Case No. 2004-00319, September 14, 2005, at 2-3 (“ULS&P should reconstruct separate cost records for major appurtenances, such as anchors, cross-arms and braces, and estimate bare pole costs by deducting the cost of the major appurtenances plus 15 percent for minor appurtenances, such as aerial cable clamps and pole top pins...”).

¹⁴ Admin. Case No. 251, at 11-12.

¹⁵ *Id.* at 12.

1 and utilized by each utility.”¹⁶ The CCF is multiplied by the bare pole cost
2 investment to produce an annualized cost to which the third component, i.e., the
3 space allocation factor, is applied to produce the annual per foot attachment cost.

4 **Q: PLEASE DESCRIBE HOW THE THIRD COMPONENT, THE SPACE**
5 **FACTOR, IS APPLIED UNDER THE KPSC METHODOLOGY.**

6 A: The space factor is the percentage of pole capacity attributable to the attacher, as
7 determined by the ratio of space occupied by attacher (agreed to be one foot) to
8 total usable space on the pole. The KPSC methodology applies a different usage
9 space factor to two and three-user poles, consistent with its differing height
10 presumptions for the two categories of poles. Specifically, the KPSC
11 methodology establishes a usage space factor of 12.24% (1/8.17 feet) for the
12 typical two-user pole and 7.59% (1/13.17) for the typical three-user pole.¹⁷

13 **Q: HAS KPCO APPLIED THE KPSC METHODOLOGY CORRECTLY?**

14 A: No, it has not. The Company’s rate calculations are inconsistent with the KPSC’s
15 cost-based methodology in a very material respect. KPCO’s underlying bare pole
16 costs are not based on the prescribed weighted average costs of 35, 40, and 45
17 foot poles. According to data responses to KCTA data requests reproduced in
18 Exhibit PDK-2, the Company indicated that its “utility pole property records are
19 not maintained by height of pole,”¹⁸ which is necessary to apply the KPSC
20 methodology as directed. Without the accounting cost and unit data necessary to
21 calculate the KPSC prescribed weighted average costs for two and three user

¹⁶ *Id.* at 11.

¹⁷ *Id.* at 13-14.

¹⁸See KPCO Responses to KCTA_2_017, 2_018, 2_019, 2_020, and 2_021, reproduced in Exhibit PDK-2.

1 poles, it is simply incorrect for KPCO to have applied the KPSC's specific two
2 and three user space allocation factors.

3 **Q: COULD YOU PLEASE EXPLAIN WHY THE KPCO'S USE OF THE**
4 **TWO AND THREE USER SPACE ALLOCATION FACTORS**
5 **INCORRECTLY APPLIES THE KPSC FORMULA?**

6 A: The KPSC's space allocation factors were specifically established to conform to
7 the respective presumed heights of two and three user poles and directly
8 correspond to the proportion of the one foot of space occupied by the attachment
9 to total usable space on those poles, i.e., 1/8.17 feet in the case of two user poles
10 and 1/13.17 feet in the case of three user poles. Applying the KPSC's height
11 specific space allocation factors to a non-height weighted average unit cost figure
12 produces distorted, unreliable, and artificially disparate costs for attachments on
13 poles designated under the KPSC methodology as two and three user poles.

14 Moreover, in the case of attachments on two user poles, KPCO's misapplication
15 of the KPSC methodology overstates the costs of hosting attachments. This is
16 because, all other things being equal, the average booked per pole cost associated
17 with two user poles, which are shorter, tends to be lower than the average booked
18 per pole cost for three user poles. The general correspondence between pole
19 height and average booked per pole cost is borne out by pole cost data provided
20 by KPCO's peer Kentucky utilities, KU and LGE, in prior rate cases.¹⁹

¹⁹ See Attachment to Direct Testimony of Patricia D. Kravtin, dated 3/5/2015, on behalf of the KCTA, In the Matter of the Application of LG&E for an Adjustment of its Electric & Gas Base Rates, Case No. 2014-003 (reproduced in Exhibit PDK-4).

1 As illustrated in Table 1, assuming a two-user/three-user pole cost relationship
 2 similar to that of KPCO’s peer Kentucky utilities, KU and LGE, the *lower*
 3 weighted average per pole cost associated with a two-user pole will largely offset
 4 the *higher* space allocation factor applied in the KPSC formula. The result is a
 5 two-user pole rate that is very close to the rate for a three-user pole. In the
 6 illustrative example shown in Table 1, rates for two and three user poles converge
 7 to within 5% of each other when the aggregate Account 364 per unit pole cost
 8 figure is adjusted to reflect a disaggregated per unit cost relationship akin to those
 9 found in pole property records maintained by other Kentucky utilities.

10 **Table 1**

Illustrative Example of Convergence of Two and three User Pole Attachment Rates When Aggregate Account 364 Costs are Adjusted to Reflect Disaggregated Two and Three User Cost Relationships Similar to Those of Peer Kentucky Utilities*			
	2 user	3 user	% Diff
Aggregate Acct 364 Avg Net Bare Cost	\$250.00	\$250.00	0%
KPSC Space Factor	0.1224	0.0759	61%
Annual Pole Cost @ 30% CCF	\$9.18	\$5.69	61%
Illustrative Weighted Avg Net Bare Cost	\$ 196.97	\$ 303.03	-35%
KPSC Space Factor	0.1224	0.0759	61%
Annual Pole Cost @30% CCF	\$7.23	\$6.90	5%
*The 35% difference between two and three user pole costs based on cost data provided by LGE and KU in Case Nos. 2014-00371 and 2014-00372.			

11
 12 This is in sharp contrast to the artificially disparate pole costs for two and three
 13 user poles produced by KPCO’s rate calculations: KPCO’s proposed two user
 14 pole attachment rate (\$11.97) is some 61% higher than its proposed three user rate
 15 (\$7.42). The large disparity in KPCO’s rates for two and three user poles is
 16 caused by KPCO’s mismatched use of an *aggregated* average Account 364 net
 17 bare pole cost and a *disaggregated* space allocation factor, rather than any

1 underlying structural or cost-based differential. KPCO's misapplication of the
2 KPSC's methodology is especially unfair in that it serves to penalizes cable
3 operators who happen to serve in areas where they are the only attacher (other
4 than the utility) on the pole, a factor outside the control of the cable operator and
5 results in unfair, unjust and unreasonable rates.

6 Data provided by KU and LGE, used in calculating rates for those utilities (see
7 calculations for LG&E reproduced in Exhibit PDK-4),²⁰ shows the weighted
8 average net bare pole cost per unit for a two-user pole to be between 65% and
9 70% of the weighted average net bare pole cost per unit of a three-user pole as
10 defined by the KPSC. In addition to showing the lower weighted average net bare
11 pole cost for two versus three user poles per utility pole property records (where
12 such data is routinely maintained), Exhibit PDK-4 provides an illustration of the
13 correct application of the KPSC methodology. In particular, the rate calculations
14 in Exhibit PDK-4 show how the KPSC methodology applies height-specific space
15 allocation factors for two and three-user poles to distinct two and three user
16 weighted average per unit costs, calculated using recorded utility pole cost and
17 unit data specific to 35, 40, and 45-foot poles. These respective costs in turn
18 determine the rates associated with two and three user poles, respectively.

19 **Q: IN ADDITION TO KPCO'S INCORRECT APPLICATION OF THE KPSC**
20 **METHODOLOGY, IS THERE ANOTHER BASIS UPON WHICH TO**
21 **FIND KPCO'S PROPOSED RATES TO BE UNJUST AND**
22 **UNREASONABLE?**

²⁰ See Id.

1 A: Yes, there is. Even if KPCO's rates were calculated consistently with KPSC
2 methodology – which as demonstrated above they are not – KPCO's 66% across
3 the board rate increase is excessive relative to objective measures of utility pole
4 cost inflation for the same ten-year period that KPCO is seeking to catch up rates.
5 The most commonly relied upon cost change index applied to pole costs is the
6 Handy Whitman Index for Public Utility Construction (HWI). The HWI is used
7 to track and project cost trends for utility costs around the nation. The HWI index
8 for the South Atlantic Region Utility Pole Plant Construction that corresponds to
9 the Account 364 costs upon which the KPCO pole attachment rates are based,
10 supports an increase of approximately 23% over the 2006-2016 period,²¹ as
11 compared with the 66% increase embodied in KPCO proposed 2016 pole rates.
12 That KPCO's 2016 pole costs reflect aggregate cost growth that is significantly
13 out of sync (nearly triple) the level of cost inflation measured by the HWI for the
14 same period is further proof of the excessiveness of KPCO's proposed pole rates.

15 **Q: ARE THERE REASONS THE COMMISSION SHOULD CONSIDER AN**
16 **OBJECTIVE COST BENCHMARK SUCH AS THE HWI IN SETTING**
17 **KPCO POLE ATTACHMENT RATES RATHER THAN RELY**
18 **STRICTLY UPON COSTS RECORDED BY THE COMPANY?**

19 A: Yes, there are several. The ten-year gap between rate setting for pole attachment
20 rates makes it very difficult and costly to undertake the level of cost scrutiny
21 needed to meaningfully examine KPCO's cost trends in both capital and operating
22 expenses over this period under a rate case standard of just and reasonableness

²¹The HWI increase for the period 2006-2016 was estimated based on the index change as shown in publicly available data from 2006 to 2013 ($490/407 = 20.39\%$), escalated for an additional three years of

1 and the principles of cost causation underlying the KPSC formula. Moreover,
2 proper scrutiny of KPCO's cost trends is further complicated owing to the fact
3 that as a subsidiary company of AEP, the Company is subject to a number of
4 intercompany service billing arrangements that may have affected pole costs over
5 the period and that may include allocations of costs that would not necessarily
6 meet the cost causation standards embodied in the KPSC pole rate methodology.²²
7 All other things being equal, KPCO's embedded pole costs would be expected to
8 more closely track, if not be less than, the increase in new pole construction costs
9 as tracked by the Handy Whitman index for the South Atlantic region.
10 Accordingly, a reasonable benchmark for a just and reasonable 2016 pole cost
11 applicable to KPCO can be determined by applying the approximate rate of cost
12 growth indicated in the HWI as experienced for utility pole construction in the
13 South Atlantic Region between 2006-2016 (i.e., 23%) to KPCO's 2006 pole cost.

14 **Q: HAVE YOU CALCULATED BENCHMARK 2016 KPCO POLE**
15 **ATTACHMENT RATES BASED ON THE HWI FOR UTILITY POLE**
16 **CONSTRUCTION FOR THE SOUTH ATLANTIC REGION?**

17 **A:** Yes, I have. The results of my benchmark analysis are summarized in Table 2
18 below. As shown in Table 2, applying the same rate of cost growth between
19 2006-2016 of approximately 23% as supported by the HWI for the South Atlantic
20 Region to KPCO's current pole rates produces 2016 pole rates of \$8.86 and \$5.49,
21 for two and three user pole attachments respectively. Because KPCO does not
22 maintain the underlying pole property records needed to correctly develop distinct

cost growth based on the average annualized cost growth for the most recent publicly available prior three years (2010-2013) of .84% [$(20.39\% + 3 \times (.84\%)) = 22.91\%$].

1 costs for two and three user poles, I have also calculated a unified or composite
 2 weighted average benchmark pole attachment rate. The unified benchmark rate is
 3 calculated by first weighting KPCO's current rates by the relative percentage of
 4 two and three-party attachments (as provided by the Company in response to
 5 KCTA data request 2_022) to derive a current weighted average rate of \$5.68.
 6 Second, I applied the HWI supported rate of cost growth (23%) to the derived
 7 current weighted average rate of \$5.68, which produces a 2016 weighted average
 8 benchmark rate of **\$6.98**.

9 **Table 2**

Benchmark KPCO 2016 Pole Attachment Rates Based on Increase in Handy Whitman Index - South Atlantic Region		
	Two Party	Three Party
Current 2006 KPCO Rate	\$7.21	\$4.47
Calculated HWI Increase 2006-2016	23%	23%
Current Rate Escalated to 2016	\$8.86	\$5.49
Attachment Weights per KCTA_2_022		
	44%	56%
Weighted Average Current Rate	\$5.68	
Weighted Average Benchmark 2016 Rate	\$6.98	

10

11 **Q: BASED ON YOUR ANALYSIS OF KPCO'S POLE RATE**
 12 **CALCULATIONS, AND THE LIMITATIONS OF KPCO'S**
 13 **ACCOUNTING RECORDS, WHAT IS YOUR RECOMMENDATION**
 14 **CONCERNING THE SETTING OF FAIR, JUST AND REASONABLE**
 15 **POLE ATTACHMENT RATES APPLICABLE TO KPCO?**

16 **A:** In the absence of the detailed pole property records required under the KPSC
 17 methodology to properly apply the KSPC's two and three user pole space

²²See Kentucky Power, FERC Form 1, p. 123.6, 123.67.

1 allocation factors as directed in Administrative Case No. 251, my
 2 recommendation is that the Commission adopt a rate for KPCO of **\$7.42**
 3 applicable to all communications attachments on *both* two or three user poles.
 4 The \$7.42 rate I am recommending is equal to the 2016 cost calculated by the
 5 Company using aggregate Account 364 net bare per pole costs and booked
 6 carrying charges, multiplied by the KSPC's 7.59% three user space allocation
 7 factor, as presented in KPCO Exhibit SLS-2, p. 1, and as shown in Table 3 below.

8 **Table 3**

9

Maximum Pole Rental Rates Applicable to KPCO		
Data for Year Ending	2016	
	2-User Pole	3-User Pole ¹⁰
Average Net Bare Pole Cost	\$270.90	\$270.90
x Carrying Charges	36.10%	36.10% ¹¹
x Space Factor	7.59%	7.59%
= Maximum Rate	\$7.42	\$7.42 ¹²
x Attachment Weights	44%	56%
= Max Composite Rate	\$7.42	
<hr/>		
KU/LGE Benchmark Rate	\$7.25	
HWI Benchmark Rate	\$6.98	

13

14

15 The \$7.42 unified rate I am recommending reflects increases to both the current
 16 two and three user rates, i.e., an increase of 3% to the current two user rate of
 17 \$7.21 and a 66% increase to the current three user pole rate of \$4.47. In addition,
 18 the unified rate approach corrects for the misalignment of costs in the current
 19 rates. Without this correction, KPCO's proposed two-user pole rate of \$11.97
 20 would not only perpetuate the economic distortions in the current rates, it would
 21 exacerbate those distortions given the significantly higher base cost levels for
 22 2016 versus 2006. That over the past ten years KPCO has been able to extract an
 23 excessively high rate from existing captive customers who happened to need to

1 attach to two user (versus three user) poles does not mean those rates were fair,
2 just and reasonable. Rather, it demonstrates the Company's market power over
3 essential pole facilities, and its resulting ability to apply extract rent in excess of
4 true economic costs.

5 The unified or composite rate of \$7.42 that I recommend is consistent with the
6 fair, just and reasonable standard set forth in Administrative Case No. 251 and in
7 subsequent KPSC rulings. The rates I have calculated are subsidy free and
8 compensatory to the Company (particularly taking into account the payment for
9 all out of pocket expenses to the utility for hosting attachments in the form of
10 make-ready and other directly reimbursable costs).²³ Due to the data limitations
11 of KPCO's pole plant records (which KPCO acknowledges are not maintained by
12 pole height),²⁴ disaggregated two and three user pole costs cannot be calculated
13 pursuant to KPSC methodology. However, the recommended composite rate is
14 consistent with the fundamental cost causation principles underlying the KPSC's
15 cost based formula methodology and the KPSC's allowance of a composite rate.²⁵

16

17 **Q: DOES YOUR RECOMMENDED COMPOSITE RATE OF \$7.42 LINE UP**
18 **WITH OTHER RATE BENCHMARKS FOR POLE ATTACHMENTS?**

19

20 **A:** Yes, it does. As shown in Table 3, my recommended composite rate of \$7.42 is in
21 line with the \$7.25 rate recently approved under settlement for KPCO's peer

²³ See KPCO Response to KCTA_2_025 (reproduced as Exhibit PDK-5).

²⁴ As explained earlier, under the KPSC methodology, the utility is expected to separately track the costs of poles and units by height such that those costs can be average bare pole cost (net of major and minor appurtenances) multiplied by the carrying charge factor multiplied by a usable space factor specific to the population of poles designated by the KPSC as two and three user poles, respectively.

²⁵See Admin. Case No. 251 at 16.

1 Kentucky utilities. In addition, my recommended rate of \$7.42 is close, but
2 higher than, the weighted average rate of \$6.98 derived (see Table 2 above) by
3 applying the cost change for the relevant 2006-2016 period supported by the
4 commonly used Handy Whitman Index for Public Utility Pole Construction (i.e.,
5 23%) to KPCO's current rates. Finally, the \$7.42 rate, as shown in Table 3, is
6 based on the utility's booked costs multiplied by a space allocation factor of
7 7.59%, which is similar to 7.41% space factor used in the widely applied FCC
8 Cable Formula. Accordingly, the \$7.42 rate is more generally going to be in line
9 with just and reasonable pole attachment rates for the vast majority of investor-
10 owned utilities nationwide whose rates are set using the Cable Formula.

11 **Q: IS THERE ANY ECONOMIC OR PUBLIC POLICY JUSTIFICATION**
12 **FOR ALLOWING KPCO TO CHARGE EXCESSIVELY HIGH POLE**
13 **RATES FOR ATTACHMENTS ON TWO USER POLES?**

14 A: No, there is not. There is compelling economic and public policy rationale for
15 adopting pole rates as low as possible that are subsidy free and compensatory to
16 the pole owner. Broadband services have been universally recognized as key to
17 enhanced economic opportunity and wellbeing. Many KPCO subscribers are also
18 customers of broadband service, and they stand to benefit from just and
19 reasonable pole rates that are as low as possible to better promote broadband
20 competition and accessibility, with miniscule to no impact on their electric rates.

21
22 **Q: DOES THIS CONCLUDE YOUR TESTIMONY?**

23 A: Yes, it does.