Data Requests and Requests for the Production of Documents by the Consumer Protection and Advocate Division of the Attorney General's Office (Second Set) To Kingsport Power Company

Data Request CPAD 2-001:

Refer to KgPCo's response to CPAD Informal Discovery Request 1-16 regarding the existing "performance-based" vs. the proposed "cyclical" approaches to vegetation management:

- (a) Explain fully and with specificity the reasons, to the extent not already identified in CPAD Informal Discovery Requests 1 -7 and 1-16, for the Company's proposal to change from a "performance-based" approach to a "cyclical" vegetation management program. Include in your response
- (i) the Company's reasons that the "performance-based" approach is no longer appropriate or adequate and
- (ii) the specific benefits that would result from such a change.
- (b) State whether or not the \$903,372 in base rates would adequately pay for the full implementation of the "performance-based" approach for a year. If it would not, explain fully and with specificity why it would not, and further provide the Company's estimates of the incremental costs that would be needed under the "performance based" approach on an annual basis.

Response CPAD 2-001:

a i-ii. Please see, as an example of the support for cycle-based vegetation management programs in another AEP jurisdiction, CPAD 2-001, Attachment 1, on the enclosed CD, the testimony of Virginia State Corporation Commission (VASCC) Staff witness Joshipura in Appalachian Power Company's cyclical vegetation management proceeding (Case No. PUE-2016-00090).

See also CPAD 2-001, Attachment 2, on the enclosed CD, the 2016 report to the VASCC of the results of APCo's pilot program in Virginia. As set out in the Report, the pilot program resulted in significant reliability improvements along the circuits addressed by the program, such as a reduction in the number of customer minutes of interruption (CMI); an improvement in the System Average Interruption Duration Index (SAIDI); and an improvement in the System Average Interruption Frequency Index (SAIFI).

See also CPAD 2-001, Attachment 3, on the enclosed CD, the 2016 report to the Public Service Commission of West Virginia regarding the reliability improvements seen in APCo's West Virginia service territory after the implementation of a system-wide, cycle-based vegetation management program in its West Virginia service territory in 2014.

Data Requests and Requests for the Production of Documents by the Consumer Protection and Advocate Division of the Attorney General's Office (Second Set) To Kingsport Power Company

Response CPAD 2-001: (continued)

b. Performance-based management can be accomplished to varying degrees of success depending on how much money is spent. The current level (\$903,372 O&M for reliability activities, of which \$841,433 was for vegetation management - see direct testimony of Company witness Allen at page 11) in base rates has led to declines in reliability as cited in Company witness Wright's testimony (see pages 5 - 8).

A "performance-based" approach prioritizes work on the Company's distribution system after taking into consideration a number of criteria. These criteria include, among other factors, the time elapsed since vegetation management activities were last performed, the results of recent line inspections, tree-related reliability indices, criticality or number of customers affected, customer complaints, and environmental conditions. The Company uses a "performance-based" approach to allocate limited labor and financial resources to particular circuits, or portions of circuits, most in need of management. The program is dynamic and flexible and is intended to respond to local needs that arise during the course of the year. Imminent hazards brought to the Company's attention will be prioritized accordingly. A "performance-based" approach is reactive in nature.

A "cyclical" vegetation management program allows a predetermined period of time to elapse before returning to a circuit, or circuit segment, to manage the vegetation. An analysis of growth rates is implicit in planning as this rate drives the timing of subsequent vegetation management. Where growth rates are high the cycle length needs to be shorter to allow the vegetation to be managed before it grows back through the conductors, increasing hazards and costs. Longer cycle lengths also require the clearances between vegetation and electric facilities to be greater. If the cycle length is too great the pruning has to be excessive and this can become unacceptable to tree owners and the public in general. A "cyclical" approach allows the Company to inspect the edges of its rights-of-way for hazard/danger trees, its number one cause of outages, on a regular basis. Further, a "cyclical" approach maintains each circuit in its entirety, which can significantly improve service restoration times as equipment damage is more visible and accessible to restoration crews. A "cyclical" program is typically more proactive in nature.

Finally, a cycle-based approach treats all customers, urban and rural, somewhat equally with regard to the level of vegetation management and subsequent reliability that can be expected. Performance-based approaches, depending upon the criteria established, tend to prioritize more urban, densely populated circuits.

Data Requests and Requests for the Production of Documents by the Consumer Protection and Advocate Division of the Attorney General's Office (Second Set) To Kingsport Power Company

Data Request CPAD 2-002:

KgPCo's SAIDI and SAIFI Statistics.

- (a) Refer to Page 5 of Company witness Wright's testimony regarding System Average Interruption Duration Index (SAIDI):
- i. Provide the raw data used in Figure 1 by year for 2010-2016.
- ii. If available, provide this data excluding Major Event Days (MED) and including MED.
- (b) Refer to Page 6 of Company witness Wright's testimony regarding System Average Interruption Frequency Index (SAIFI):
- i. Provide the raw data used in Figure 2 by year for 2010-2016.
- ii. If available, provide this data excluding Major Event Days (MED) and including MED.
- (c) Refer to the testimony of Company witness Castle regarding the Company's proposed annual "true-up" filing under the TRP & MS Rider.
- i. Will the Company be providing a service quality report stating system SAIDI and SAIFI indices with each annual filing?
- ii. Does the Company have target SAIDI and SAIFI numbers for any of the first four years of the implementation of the TRP & MS Rider? If so, provide such target number(s)?
- (d) Refer to pages 4 and 17 of Company witness Wright's testimony regarding measuring the reliability of the Company's distribution network and the definition of "major storm" and "major event day." Provide the full text of IEEE Standard 1366-2012. In addition, state in detail with specificity the definitions of and calculations related to (as described on page 17, lines 14-23, of Company witness Wright's testimony) "major storm" and "major event day" that the Company is requesting the TPUC to adopt and approve in this Docket.

Response CPAD 2-002:

- a-b. Please see CPAD-2-002, Attachment 1, for the raw data.
- c. i. Yes.
- c. ii. No, not during the first four years of implementation. However, as detailed in Company witness Wright testimony in this case (see pages 15-16), the Company estimates improvements to SAIDI and SAIFI of 30 percent and 25 percent respectively, excluding major events, at the end of the tenth-year of the TRP.

Data Requests and Requests for the Production of Documents by the Consumer Protection and Advocate Division of the Attorney General's Office (Second Set) To Kingsport Power Company

Response CPAD 2-002: (continued)

d. The full text of the IEEE standard is a copyrighted document. The full text can be purchased at http://standards.ieee.org/findstds/standard/1366-2012.html. Some excerpts from that standard are shown in CPAD-2-002, Attachment 2. The Company is proposing that SAIFI and SAIDI excluding major event days, calculated in accordance with IEEE 1366, would be appropriate metrics to monitor system reliability.

Data Requests and Requests for the Production of Documents by the Consumer Protection and Advocate Division of the Attorney General's Office (Second Set) To Kingsport Power Company

Data Request CPAD 2-003:

Refer to CPAD Informal Discovery Request 1-17 and KgPCo's response to that request regarding the SAIFI and SAIDI indices for each affiliate of KgPCo from 2010 through 2016.

- (a) CPAD respectfully requests that the Company reconsider its objection to this response and provide the requested information.
- (b) Provide the definition of major event in Tennessee and each referenced State.

Response CPAD 2-003:

- a. Please see CPAD-2-003, Attachments 1-3, on the enclosed CD, for additional information on SAIFI and SAIDI indices for each affiliate of KgPCo as well as publically available information from utilities who report this information to the Energy Information Administration (EIA) for years that this information was publically available.
- b. KgPCo uses the IEEE standard definition of a major event. Please see CPAD-2-002, part c, for additional information. See also the direct testimony of Company witness Wright at pages 17-18.

Data Requests and Requests for the Production of Documents by the Consumer Protection and Advocate Division of the Attorney General's Office (Second Set) To Kingsport Power Company

Data Request CPAD 2-004:

With reference to Exhibit A to this Second Discovery Request, confirm that the data set out on Exhibit A is complete and accurate. If the Company is not able to confirm that the data on Exhibit A is complete and accurate, provide:

- (a) a detailed explanation as to how such data is not complete and accurate; and
- (b) any additional information and/or corrections to the data on Exhibit A that would make the data on Exhibit A complete and accurate.

Response CPAD 2-004:

Exhibit A appears to be an accurate reproduction of EIA-861 data.

Data Requests and Requests for the Production of Documents by the Consumer Protection and Advocate Division of the Attorney General's Office (Second Set) To Kingsport Power Company

Data Request CPAD 2-005:

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Refer to KgPCo's response to CPAD Informal Discovery Request 1-11 regarding source data (e.g., general ledger, trial balance schedules, etc.) to be included with the annual TRP & MS Rider filing: Provide a copy of this data that the Company expects to file for the 12 months ended September 30, 2016.

Response CPAD 2-005:

See CPAD 2-005, Attachments 1-7, on the enclosed CD, for the following examples of documents that the Company expects to include with the annual TRP & MS Rider filings:

- Attachment 1 2016 KgPCo General Ledger
- Attachment 2 Monthly KgPCo balance sheets for 2014 and 2015 that were provided in the 2016 base rate case Docket No. 16-00001
- Attachment 3 Monthly KgPCo income statements for 2014 and 2015 that were provided in the 2016 base rate case Docket No. 16-00001
- Attachment 4 Detail of charges to vegetation management project for 2016 referenced in Company witness Allen's direct testimony, p. 4
- Attachment 5 Detail of charges to circuit inspection project for 2016 referenced in Company witness Allen's direct testimony, p. 4
- Attachment 6 Detail of O&M charges to major storm project for July 8, 2016 thunderstorm
- Attachment 7 Jan. 2017 sample journal entry from the Fuel & Purchased Power Adjustment Rider monthly over/under-recovery calculation

Data Requests and Requests for the Production of Documents by the Consumer Protection and Advocate Division of the Attorney General's Office (Second Set) To Kingsport Power Company

Data Request CPAD 2-006:

Provide pro forma data and information - or describe in detail with specificity such data and information - that the Company proposes to file on a monthly or quarterly basis, as well as with each annual filing, under the TRP & MS Rider demonstrating the activity and results of the Rider over its term.

- (a) In your response, specifically explain in detail the metrics the Company will use, and will file with its annual TRP & MS Rider filing (and other appropriate filings), that would enable the TPUC and Consumer Advocate to evaluate the reasons and benefits set out in the Company's response to CPAD Informal Discovery Request 1-16 and as expanded and/or clarified in Request 2-1 above.
- (b) State the metrics that led to the approval of similar riders in West Virginia and Virginia and provide a copy of each report (and/or any analysis or studies) reflecting metrics approved in those States.

Response CPAD 2-006:

- a. The Company would propose that the same type of metrics reported in WV and VA would be provided in TN.
- b. Please see CPAD 2-001, Attachments 3 and 4, on the enclosed CD, for the most recent reports in VA and WV.

Data Requests and Requests for the Production of Documents by the Consumer Protection and Advocate Division of the Attorney General's Office (Second Set) To Kingsport Power Company

Data Request CPAD 2-007:

Refer to KgPCo's response to CPAD Informal Discovery Request 1-10 regarding the individuals that will be primarily responsible for calculating the annual TRP & MS Rider filings and providing testimony. Identify these individuals and the individuals' titles, and provide a copy of each such individual's Vitae describing their qualifications to support these calculations.

Response CPAD 2-007:

Please refer to the direct testimony of William K. Castle, Director - Regulatory Services - Appalachian Power Company, and A. Wayne Allen, Manager - Regulatory Accounting - AEPSC, in this proceeding. Each witness's testimony provides a summary of their educational background and business experience, as well as previous cases where they have provided testimony.

Data Requests and Requests for the Production of Documents by the Consumer Protection and Advocate Division of the Attorney General's Office (Second Set) To Kingsport Power Company

Data Request CPAD 2-008:

Refer to KgPCo's response to CPAD Informal Discovery Request 1-12 regarding attestation of the amounts included in the TRP & MS Rider. Identify the individual who the Company expects will provide this attestation and the individual's title, and provide a copy of their Vitae describing their qualifications to support these amounts.

Response CPAD 2-008:

The Manager - Regulatory Accounting - AEPSC will provide the attestation regarding the accounting information.

Data Requests and Requests for the Production of Documents by the Consumer Protection and Advocate Division of the Attorney General's Office (Second Set) To Kingsport Power Company

Data Request CPAD 2-009:

Provide a revised proposed tariff that reflects generally the form and applicable (to the requests made by the Company in the Petition) aspects of the substance of the definitions, formulas, mechanics, terms and conditions, and other information set out in, by way of example, the tariff approved in TPUC Docket No. 13-00130.

Response CPAD 2-009:

See CPAD 2-009, Attachments 1 and 2, on the enclosed CD, for both redlined and clean tariff sheets that generally reflect the form and applicable aspects of the Company's Petition set out in, by way of example, the tariff sheets approved in TPUC Docket No. 13-00130. The Company is solely providing this work product to be responsive to CPAD 2-009. There are significant differences between the business of the Company and the company that supplied the approved tariff in TPUC Docket No. 13-00130. As a result, both CPAD 2-009 Attachment 1 and CPAD 2-009 Attachment 2 should be regarded as a work product for discussion purposes only.

Data Requests and Requests for the Production of Documents by the Consumer Protection and Advocate Division of the Attorney General's Office (Second Set) To Kingsport Power Company

Data Request CPAD 2-010:

For each class of customer, provide a pro forma customer bill that includes the proposed TRP & MS Rider surcharge identified as a separate line item.

Response CPAD 2-010:

See CPAD 2-010, Attachment 1, on the enclosed CD, for a pro forma customer bill that includes the proposed TRP & MS Rider surcharge identified as a separate line item. Because the Company has not proposed a rate increase or decrease in the initial year of the TRP & MS Rider, the attachment uses the forecasted rates developed in witness Castle's testimony on page 7 Figure 1.

Data Requests and Requests for the Production of Documents by the Consumer Protection and Advocate Division of the Attorney General's Office (Second Set) To Kingsport Power Company

Data Request CPAD 2-011:

Provide an estimate of the incremental workforce that the Company expects to need, in terms of both employees and contractors, to undertake the proposed TRP & MS Rider.

Response CPAD 2-011:

The Company estimates that 1 additional internal employee would be added. The Company also estimates that approximately 15-20 additional contract tree crews or 50-70 additional vegetation contract personnel would be added.

Data Requests and Requests for the Production of Documents by the Consumer Protection and Advocate Division of the Attorney General's Office (Second Set) To Kingsport Power Company

Data Request CPAD 2-012:

With reference to CPAD Informal Discovery Request No. 1-12 and the Company's response, confirm that the Company is willing to verify that no costs that are being recovered as a result of Docket No. 16-00001 are being recovered as a result of this Docket No. 17-00032. In other words confirm that there will be no double counting of costs. Explain in detail and with specificity the procedures and practices that the Company will undertake to assure that no double counting occurs.

Response CPAD 2-012:

As stated on page 4 of the direct testimony of Company witness Castle, base rates are designed to recover \$903,372 (for reliability activities, of which \$841,433 was for vegetation management - see direct testimony of Company witness Allen at page 11) in distribution reliability O&M expenses and \$392,381 in major storm related O&M costs. The TRP & MS Rider is designed to recover from (or return to) customers actual costs above (or below) these amounts. As stated on page 11 of the direct testimony of Company witness Allen, the Company will include the combined TRP costs (both O&M and capital costs) and major storm O&M expenses incurred above or below the monthly average of \$107,979 (\$1,295,753 annually divided by 12 months) of such combined costs built into base rates in its monthly calculation of over or under-recovered TRP & MS Rider costs. Therefore, there will be no double recovery of costs under the Company's TRP & MS Rider proposal.

Data Requests and Requests for the Production of Documents by the Consumer Protection and Advocate Division of the Attorney General's Office (Second Set) To Kingsport Power Company

Data Request CPAD 2-013:

Identify, for each response to the CPAD Informal Discovery Request and this Second Discovery Request, all persons assisting in the answering of each request. State the request(s) on which each such person(s) assisted.

Response CPAD 2-013:

The Company objects to this request on the grounds that it is overly broad and unduly burdensome. Identifying separately and individually the individuals who assisted with each particular request would be unduly burdensome. The Company further objects to this request to the extent it purports to require the disclosure of information or communications protected by the attorney-client and/or work product privileges. Subject to and without waiving the foregoing objections, the Company refers the CPAD to the individuals who provided pre-filed testimony on behalf of the Company in this matter.

Subject to and without waiving the foregoing objections, the Company relies on many employees throughout Kingsport and American Electric Power Service Corporation from multiple departments to respond to each request.

Data Requests and Requests for the Production of Documents by the Consumer Protection and Advocate Division of the Attorney General's Office (Second Set) To Kingsport Power Company

Data Request CPAD 2-014:

Identify each person who you expect to call as an expert witness at the hearing on the merits in this Docket, and for each such expert witness:

- (a) Identify the field in which the witness is to be offered as an expert;
- (b) Provide complete background information, including the witness's current employer, as well as his or her educational, professional and employment history, and qualifications within the field in which the witness is expected to testify;
- (c) Identify all publications written or presentations presented in whole or in part by the witness, including either a copy of all such publications and presentations or a reference to where such publications and presentations may be publicly obtained;
- (d) Provide the grounds for the opinions to which the witness is expected to testify, and provide a summary of the grounds for each such opinion;
- (e) Identify any matter in which the expert has testified (through deposition or otherwise) by specifying the name, docket number and forum of each case, the dates of the prior testimony and the subject of the prior testimony, and identify the transcripts of any such testimony;
- (f) Identify the terms of the retention or engagement of each expert including but not limited to the terms of any retention or engagement letters or agreements relating to his/her engagement, testimony, and opinions as well as the compensation to be paid for the testimony and opinions;
- (g) Identify any exhibits to be used as a summary of or support for the testimony or opinions provided by the expert; and
- (h) Produce copies of all documents, summaries, charts, trade articles, journals, treatises, publications, workpapers, file notes, chart notes, tests, test results, interview notes, and consultation notes provided to, reviewed by, utilized by, relied upon, created by, or produced by any proposed expert witness m evaluating, reaching conclusions or formulating an opinion in this matter.

Response CPAD 2-014:

The Company objects to this request to the extent it attempts to impose on the Company any obligations greater than or in addition to those required by the Tennessee Rules of Civil Procedure and any Scheduling Order issued by the Hearing Officer in this matter. The Company further objects to this request on the grounds that it is overbroad, unduly burdensome. The

Data Requests and Requests for the Production of Documents by the Consumer Protection and Advocate Division of the Attorney General's Office (Second Set) To Kingsport Power Company

Response CPAD 2-014: (continued)

Company also objects on the grounds that several phrases used in the request are vague, ambiguous, and undefined, such as "complete background information," "work papers," and "file notes." The Company further objects to this request to the extent it seeks communications that are protected by the attorney-client and/or work product privileges. Subject to and without waiving the foregoing objection, the Company does not presently intend to call any external expert witnesses to testify at the hearing. In addition, the Company refers the CPAD to its pre-filed testimony.

Data Requests and Requests for the Production of Documents by the Consumer Protection and Advocate Division of the Attorney General's Office (Second Set) To Kingsport Power Company

Data Request CPAD 2-015:

Produce copies of all documents referred to or relied upon in responding to these discovery requests.

Response CPAD 2-015:

The Company objects to this request on the grounds that it is overbroad and ambiguous as to the documents and information it seeks. The Company further objects to this request to the extent it seeks documents relied upon by the Company in responding to the CPAD's discovery requests that are protected by the attorney-client and or work-product privilege. Subject to and without waiving its objections, the Company refers the CPAD to the documents referenced in the Company's responses and produced herewith.

Data Requests and Requests for the Production of Documents by the Consumer Protection and Advocate Division of the Attorney General's Office (Second Set) To Kingsport Power Company

Data Request CPAD 2-016:

Produce copies of all hearing exhibits that you plan to introduce, use, or reference at the hearing on the merits in this Docket.

Response CPAD 2-016:

The Company objects to this request to the extent it seeks to impose upon the Company obligations other than those required by the Tennessee Rules of Civil Procedure and any Scheduling Order issued by the Hearing Officer in this matter. Subject to and without waiving its objections, the Company states that it has not determined at this time which exhibits it intends to introduce as evidence at the hearing of this matter. Further answering, the Company refers the CPAD to documents submitted with its pre-filed testimony, produced in response to staff data requests, or produced herewith.

Data Requests and Requests for the Production of Documents by the Consumer Protection and Advocate Division of the Attorney General's Office (Second Set) To Kingsport Power Company

Data Request CPAD 2-017:

Produce copies of all documents -- including, without limitation, work papers, spreadsheets, summaries, charts, notes, exhibits, articles, journals, treatises, periodicals, publications, reports, records, statements, Internet web pages, or financial information -- relied upon by any of your witnesses in evaluating, reaching conclusions, or formulating an opinion in this matter.

Response CPAD 2-017:

The Company objects to this request on the grounds that it is overbroad and ambiguous as to the documents and information it seeks. The Company further objects to this request to the extent it seeks documents relied upon by the Company witnesses that are protected by the attorney-client and or work-product privilege. Subject to and without waiving its objections, the Company refers the CPAD to the documents submitted with its pre-filed testimony, produced in response to staff data requests, or produced herewith.

Data Requests and Requests for the Production of Documents by the Consumer Protection and Advocate Division of the Attorney General's Office (Second Set) To Kingsport Power Company

Data Request CPAD 2-018:

Identify all information, documents and things filed in the present docket record, including all responses to discovery of the parties and data request from the TPUC Staff, which KgPCo produced in this Docket and does not agree to stipulate to the authenticity of such information, documents and things in this proceeding. For each separate piece of information, documents and things which KgPCo produced in this Docket and KgPCo contends is not admissible as evidence describe in specific detail any objection(s) KgPCo claims as to admissibility into the evidentiary record in this Docket.

Response CPAD 2-018:

The Company objects to this request on the grounds that it is overly broad, unduly burdensome, and seeks to impose on the Company obligations greater than or in addition to those imposed by the applicable rules of civil procedure.

Without waiving this objection, the Company states that it is not aware of any information, documents, and things that it would not stipulate as to its authenticity.

Data Requests and Requests for the Production of Documents by the Consumer Protection and Advocate Division of the Attorney General's Office (Second Set) To Kingsport Power Company

Data Request CPAD 2-019:

Data or discovery

- (a) Provide a copy of all data or discovery requests served on the Company from all parties concerning the testimony of KgPCo witnesses and other issues being addressed in this case.
- (b) Provide a copy of the Company's responses to all data requests from 2-19(a) above.
- (c) To the extent that any of the responses being provided in 2-19(b) involve calculations made using a program such as Microsoft Excel, or Access, include a complete copy of the electronic files, with formulas, calculations, macros and cell references intact.
- (d) Update continuously your response to this data request as the Company receives and responds to data requests of other parties.

Response CPAD 2-019:

The Company will provide to the CPAD copies of data requests of, and responses to, all parties at the time the Company responds to such requests.