IN THE TENNESSEE REGULATORY AUTHORITY AT NASHVILLE, TENNESSEE

IN RE:)	
)	
PETITION OF KINGSPORT POWER)	
COMPANY d/b/a AEP APPALACHIAN)	DOCKET NO. 16-00001
POWER GENERAL RATE CASE AND)	
MOTION FOR PROTECTIVE ORDER)	

CONSUMER ADVOCATE'S REPONSES TO INTERROGATORY REQUESTS AND REQUESTS FOR PRODUCTION OF KINGSPORT POWER COMPANY d/b/2 AEP APPALACHIAN POWER DIRECTED TO THE CONSUMER PROTECTION AND ADVOCATE DIVISION OF THE OFFICE OF THE ATTORNEY GENERAL

Comes the Consumer Protection and Advocate Division ("Consumer Advocate" or "CPAD") in the above-referenced Tennessee Regulatory Authority ("TRA") docket and hereby responds to the Interrogatory Requests and Requests for Production of Kingsport Power Company d/b/a AEP Appalachian Power ("Company") Directed to the Consumer Protection and Advocate Division of the Office of the Attorney General.

REQUEST NO. 1: To the extent not previously provided, please provide a copy of the CPAD's Exhibits, schedules, and all workpapers that the CPAD and its witnesses used to produce such Exhibits and schedules filed by the CPAD and its witnesses in this TRA docket in Microsoft Excel format with formulas intact.

RESPONSE: The Consumer Advocate has previously provided the CPAD's Exhibits, schedules, and all workpapers that the CPAD and its witnesses used to produce such Exhibits and schedules filed by the CPAD and its witnesses in this TRA docket in Microsoft Excel format with formulas intact. In response to the Company's request, Dr. Klein has prepared additional supporting documentation that is attached

hereto as Attachment A, with the same being provided in Excel format with formulas intact to the TRA, the Company, and (upon their request) other intervening parties.

RESPONSIBLE WITNESSES: Dr. Klein and Messrs. Novak and Smith

REQUEST NO. 2: (a) Please provide a list, including the docket number and state, of each electric utility rate case in which Mr. Novak and Dr. Klein have submitted testimony. (b) For each such case, please indicate whether the testimony addresses class cost of service or rate of return issues. (c) For any case in which the testimony is not readily available electronically on a website, please provide a copy.

RESPONSE:

- a. Please refer to Attachment WHN-1 that was included with Mr. Novak's testimony for a list of selected cases that Mr. Novak has been involved with. No other list is presently available. Please refer to Exhibit 1 of Dr. Klein's pre-filed testimony for the list of cases in which Dr. Klein has been involved.
- b. Please refer to the CPAD's response of August 6, 2015 in TRA Docket 15-00024 Petition of Kingsport Power Company D/B/A AEP Appalachian Power for Approval of Storm Damage Rider Tariff. This response provides a comprehensive listing of all dockets that Mr. Novak has been involved with that included a class cost of service study. Dr. Klein has testified in the following electric utility rate case dockets, all of which occurred in Tennessee and involve the rate of return for Kingsport Power Company:

Kingsport Power Co. (92-04425) October 1992.

Kingsport Power Company (90-05736) Nov. 1990.

Kingsport Power Co. (89-02126) March 1989.

Kingsport Power Co. (U-86-7472) May 1987.

c. As far as Mr. Novak and Dr. Klein are aware, virtually all of the referenced testimony before the TRA is available electronically on a website or otherwise from the TRA.

RESPONSIBLE WITNESSES: Dr. Klein and Mr. Novak

REQUEST NO. 3: Please provide a list, including the docket number and state, of the direct and rebuttal testimony submitted by Mr. Novak during the past 5 years in any regulatory proceeding. For any case in which the testimony is not readily available electronically on a website, please provide a copy.

RESPONSE: Please see the Consumer Advocate's response to Request 2 above.

RESPONSIBLE WITNESSES: Mr. Novak

REQUEST NO. 4: Refer to Mr. Novak's testimony, page 4, lines 8-9, regarding "the Minimum Filing Requirement Guidelines." Please produce a written dated copy of such Guidelines applicable to electric utility companies in a rate case.

RESPONSE: Please refer to the Company's January 12, 2016 data request responses filed in this docket 16-00001 that the Company has captioned as "Kingsport Power's Response to Informal Staff Request" and that are commonly referred to as the "Minimum Filing Requirement Guidelines" by the TRA, the TRA Staff, and parties and utilities that appear before the TRA.

RESPONSIBLE WITNESS: Mr. Novak

REQUEST NO. 5: Please provide Mr. Novak's definition of "throughput" as used on page 23, line 13 of his testimony.

RESPONSE: The complete text of Mr. Novak's testimony relating to "throughput"

referred to in the request reads as follows: "I could easily justify allocating many of these same costs based upon the total throughput of each customer class which would then allocate a majority of the costs to industrial customers." Webster's dictionary defines "throughput" as "the amount of material, data, etc., that enters and goes through something (such as a machine or system)." As used by Mr. Novak in the testimony quoted above, "throughput" means the electric usage for each customer class.

RESPONSIBLE WITNESS: Mr. Novak

REQUEST NO. 6: (a) Is it Mr. Novak's position that "throughput" is a recognized cost causation factor associated with distribution facilities in FERC Accounts 360 through 370? (b) Please provide each authoritative source that Mr. Novak believes supports the use of "throughput" to allocate costs in a Kingsport Power Company class cost of service study, as discussed on page 23 at line 13 of his testimony.

RESPONSE: To Mr. Novak's knowledge, the TRA has never, as a matter of policy in the context of rate design, set rates based on a class cost of service study. Since Mr. Novak has not proposed to allocate costs to the different customer classes through the use of a class cost of service study, he does not in connection with his testimony take a position on what may or may not constitute "authoritative sources" for cost allocators that the Company has requested. With that said, however, "throughput" is certainly a method that can be used to allocate cost to different customer classes. In fact, Mr. Novak notes that the Company has used energy, or throughput, as one of the allocators in its own class cost of service study.

RESPONSIBLE WITNESS: Mr. Novak

REQUEST NO. 7: (a) Please identify each methodology that is used in the Kingsport Power Company's class cost of service study with which Mr. Novak disagrees. (b) For each such methodology, please provide an explanation of why he disagrees with it.

RESPONSE: To Mr. Novak's knowledge, the TRA has never, as a matter of policy in the context of rate design, set rates based on a class cost of service study. Since Mr. Novak has not provided, in his testimony, a critique of each component of the Company's class cost of service study, he does not in connection with his testimony take a position on what may or may not constitute a Company methodology in this context — or provide a specific critique of same. Instead, Mr. Novak's testimony supports the long-standing policy of the TRA to allocate rate increases to each customer class on the basis of existing margin.

RESPONSIBLE WITNESS: Mr. Novak

REQUEST NO. 8: Does Mr. Novak believe that the methodology used in Kingsport Power Company's class cost of service study is inconsistent with, or contrary to, generally accepted class cost allocation methods, as identified in the NARUC Electric Utility Cost Allocation Manual?

RESPONSE: To Mr. Novak's knowledge, the TRA has never, as a matter of policy in the context of rate design, set rates based on a class cost of service study. Adoption of the NARUC Electric Utility Cost Allocation Manual by state public utility commissions is not a requirement for setting rates, and, to Mr. Novak's knowledge, the TRA has never adopted such Manual. In addition, in Mr. Novak's experience, it is exceedingly rare to find any public utility commission that completely sets rates in accordance with any such Manual or any specific class cost of service study.

RESPONSIBLE WITNESS: Mr. Novak

REQUEST NO. 9: Please provide Mr. Novak's definition of "margin" as used in his testimony and exhibits.

RESPONSE: As used in Mr. Novak's testimony, "margin" refers to current distribution revenues only. Alternatively, "margin" can also refer to total revenues less purchased power costs.

RESPONSIBLE WITNESS: Mr. Novak

REQUEST NO. 10: Please explain why Mr. Novak believes that the approved increase should be allocated to rate classes on the basis of "margins."

RESPONSE: Please refer to Page 25 of Mr. Novak's testimony which states that "...an across-the-board increase to all customer classes more equitably spreads the burden of any increase in rates and is preferable to the Company's CCOSS results." RESPONSIBLE WITNESS: Mr. Novak

REQUEST NO. 11: (a) Is Mr. Novak aware of any TRA order that uses Mr. Novak's "margin" method to allocate the approved rate increase for an electric utility? (b) If so, please provide a citation to each such order, indicating the docket number. (c) For any case in which the order is not readily available electronically on the TRA website, please provide a copy.

RESPONSE: As the Company is well aware, Kingsport Power Company is the only electric utility of significant size regulated by the TRA. Since this docket represents the first rate case in approximately 24 years for Kingsport Power Company, it would naturally stand to reason that the TRA has not had to rule recently on a rate increase allocation for an electric utility. However, it is Mr. Novak's opinion that the TRA has adopted an across-the-board rate design philosophy in most, if not all, of the

litigated and settled rate cases for energy and water utilities under its jurisdiction in recent memory.

RESPONSIBLE WITNESS: Mr. Novak

REQUEST NO. 12: (a) Is Mr. Novak aware of any regulatory commission order from any state commission that uses Mr. Novak's "margin" method to allocate the approved rate increase for an electric utility? (b) If so, please provide a citation to such order, indicating the docket number and state. (c) For any case in which the order is not readily available electronically on a website, please provide a copy.

RESPONSE: The Consumer Advocate objects to this request on the ground that it is overly burdensome and requires clarification before a complete and accurate response may be considered. Without waiving the objection, Mr. Novak would respectfully point out that a margin method was used in a recent general rate case before the TRA in docket 14-00146, which is readily available on the TRA's website.

RESPONSIBLE WITNESS: Mr. Novak

REQUEST NO. 13: Is there any class cost of service methodology that Mr. Novak believes would be appropriate to use to allocate Kingsport's costs to rate classes in this case?

RESPONSE: Please refer to page 25 of Mr. Novak's testimony which states that "...

. an across-the-board increase to all customer classes more equitably spreads the burden of any increase in rates and is preferable to the Company's CCOSS results."

RESPONSIBLE WITNESS: Mr. Novak

REQUEST NO. 14: Please provide Mr. Novak's definition of "value of service" as he uses the term in his testimony.

RESPONSE: Mr. Novak would respectfully point out that the full text of Mr. Novak's

statement related to "value of service" appears on Page 23 of his pre-filed direct testimony and reads as follows:

Finally, other factors beyond just the cost of service need to also be considered in allocating costs. These other factors include value of service, product marketability, encouragement of efficient use of facilities, broad availability of service functions, and a fair distribution of charges among users. Since it is impossible to properly consider each of these other factors, it follows that no mechanical or mathematical formula can ever be applied to the cost of service that would translate it directly into rates.

As the term "value of service" is used in Mr. Novak's testimony, it generally refers to the difference in value that different customer groups place on electric service as a measure for cost allocation. Mr. Novak would further respectfully point out the inherent challenge of calculating a "value of service" that would by its nature be intrinsic and unique to every customer. Thus, Mr. Novak uses the term "value of service" as just one factor to consider beyond a cost of service study in allocating costs.

RESPONSIBLE WITNESS: Mr. Novak

REQUEST NO. 15: (a) Please provide a description of how Mr. Novak would measure or calculate "value of service" for each rate class of Kingsport Power Company. (b) Please provide any such analysis performed in this case.

RESPONSE: Mr. Novak would respectfully point out the inherent challenge of calculating a "value of service" that would by its nature be intrinsic and unique to every customer. Please also see the response to Request 14, which is incorporated herein by reference.

RESPONSIBLE WITNESS: Mr. Novak

REQUEST NO. 16: (a) With regard to Mr. Novak's testimony at page 23, line 19, is

Mr. Novak aware of any TRA order in which "value of service" has been used to set electric utility rates? (b) If so, please provide a citation to such order, indicating the docket number. (c) For any case in which the order is not readily available electronically on the TRA website, please provide a copy.

RESPONSE: As the Company is well aware, Kingsport Power Company is the only electric utility of significant size regulated by the TRA. Since this docket represents the first rate case in approximately 24 years for Kingsport Power Company, it would naturally stand to reason that the TRA has not had to rule recently on a rate increase allocation for an electric utility.

RESPONSIBLE WITNESS: Mr. Novak

REQUEST NO. 17: (a) With regard to Mr. Novak's testimony at page 23, line 19, has Mr. Novak identified any regulatory commission order that uses "value of service" to set electric utility rates? (b) If so, please provide a citation to such order, Indicating the docket number and state. (c) For any case in which the order is not readily available electronically on a website, please provide a copy.

RESPONSE: The Consumer Advocate objects to this request on the ground that it is overly burdensome, requires clarification before a complete and accurate response may be considered, and seeks information that would require potentially inaccurate or unwarranted speculation at this point in this case. Without waiving the objection, Mr. Novak would respectfully point out the inherent challenge of calculating a "value of service" that would by its nature be intrinsic and unique to every customer.

RESPONSIBLE WITNESS: Mr. Novak

REQUEST NO. 18: Please explain why Mr. Novak believes that "value of service" is

an appropriate basis for allocating costs in an electric utility rate case.

RESPONSE: Mr. Novak would respectfully point out that the full text of Mr. Novak's statement related to "value of service" appears on Page 23 of his pre-filed direct testimony and reads as follows:

Finally, other factors beyond just the cost of service need to also be considered in allocating costs. These other factors include value of service, product marketability, encouragement of efficient use of facilities, broad availability of service functions, and a fair distribution of charges among users. Since it is impossible to properly consider each of these other factors, it follows that no mechanical or mathematical formula can ever be applied to the cost of service that would translate it directly into rates.

As the term "value of service" is used in Mr. Novak's testimony, it generally refers to the difference in value that different customer groups place on electric service as a measure for cost allocation. Mr. Novak would further respectfully point out the inherent challenge of calculating a "value of service" that would by its nature be intrinsic and unique to every customer. Thus, Mr. Novak uses the term "value of service" as just one factor to consider beyond a cost of service study in allocating costs. RESPONSIBLE WITNESS: Mr. Novak

REQUEST NO. 19: Please explain Mr. Novak's understanding of how "peak day" consumption is used in Kingsport Power Company's class cost of service study to allocate costs (refer to Mr. Novak's testimony at page 23, line 10).

RESPONSE: The Consumer Advocate objects to this request on the ground that it is overly burdensome, requires clarification before a complete and accurate response may be considered, and seeks information that would require potentially inaccurate or unwarranted speculation at this point in this case. Without waving the objection,

Mr. Novak would respectfully point out that the full text of Mr. Novak's statement related to "peak day consumption" appears on Page 23 of his pre-filed direct testimony and reads as follows:

The assignment of 40 individual allocation factors to each element of the Company's cost of service is inherently judgmental, and the Company has not introduced any evidence to fully explain its rationale for each individual allocation assignment. For example, the Company has allocated a significant portion of its costs based upon peak day consumption, meaning that almost all of these costs will be allocated to residential and commercial customers without any discussion or evidence as to why such an allocation is appropriate. I could easily justify allocating many of these same costs based upon the total throughput of each customer class which would then allocate a majority of the costs to industrial customers. Since the Company has not provided any rationale for its individual allocation choices it is impossible to determine its rationale for cost allocation.

In view of Mr. Novak's rejection of the use of the Company's class cost of service study, it is inappropriate for him to speak to how individual allocation factors may or not be applied by the Company.

RESPONSIBLE WITNESS: Mr. Novak

REQUEST NO. 20: Please explain why Mr. Novak has not calculated the "current margin" for each rate class as the difference between test year revenues and the fuel and purchased power expenses paid by each class in the test year?

RESPONSE: Since rates are being set for a future attrition year, Mr. Novak calculates the "current margin" for each rate class as the difference between the attrition year pro forma revenues and the fuel and purchased power expenses paid by each class in the attrition year. The use of a test period current margin would defeat the purpose of the attrition period concept.

RESPONSIBLE WITNESS: Mr. Novak

REQUEST NO. 21: (a) Does Mr. Novak agree that the "margin" for each rate class,

calculated on the basis of total revenues less fuel and purchased power expenses, reflects the

net revenues paid by the rate class in the test year for all costs (e.g., distribution, customer

billing, etc.) that are not fuel and purchased power costs from Appalachian Power Company

passed through to Kingsport Power Company? (b) If not, please explain each of the reasons

why such a calculation is not the "margin" paid by the rate class.

RESPONSE: Mr. Novak agrees that the "margin" for each rate class, calculated on

the basis of total revenues less fuel and purchased power expenses, reflects the net

revenues paid by the rate class in the test year for all costs (e.g., distribution, customer

billing, etc.) that are not fuel and purchased power costs from Appalachian Power

Company passed through to Kingsport Power Company.

RESPONSIBLE WITNESS: Mr. Novak

REQUEST NO. 22: (a) Does Mr. Novak agree that customers who take service at sub-

transmission voltage and above do not cause any distribution costs associated with primary lines,

secondary lines, poles, distribution substations, overhead and underground line transformers

(FERC Account 368)? (b) If not, please provide each reason why Mr. Novak cannot agree with

this statement.

RESPONSE: The Consumer Advocate objects to this request on the ground that it

requires clarification before a complete and accurate response may be considered and

seeks information that would require potentially inaccurate or unwarranted

speculation at this point in this case.

RESPONSIBLE WITNESS: Mr. Novak

Page 12

REQUEST NO. 23: (a) Please provide a list of all rate filings in which Mr. Novak or Mr. Smith have adjusted ADIT using "linear regression" analysis related to plant-in-service. (b) Please provide a citation to the case, including docket number and state. (c) For any case in which the testimony is not readily available electronically on a website, please provide a copy.

RESPONSE: Mr. Novak does not have a list of rate filings in which ADIT was forecasted using linear regression analysis related to plant-in-service. Mr. Smith does not recall any cases in which he adjusted ADIT using "linear regression" analysis and was not able to locate any in his files.

RESPONSIBLE WITNESSES: Messrs. Novak and Smith

REQUEST NO. 24: (a) Please indicate Mr. Novak's understanding of the IRS Normalization Rules regarding ADIT in Forecast Periods. (b) Please include in the discussion the consequences of a normalization violation. (c) Provide citations to or all documents relied upon in answering this question.

RESPONSE: The Consumer Advocate objects to this request on the ground that it requires clarification before a complete and accurate response may be considered and seeks information that would require potentially inaccurate or unwarranted speculation at this point in this case. Without waving the objection, Mr. Novak would acknowledge generally that Mr. Novak is well aware of the normalization rules promulgated by the Internal Revenue Service and as utilities have asserted their potential application in various contexts.

RESPONSIBLE WITNESS: Mr. Novak

REQUEST NO. 25: Please provide a list of all cases, including the docket number and state, in which Mr. Novak has offered testimony with regards to tax normalization issues in other

rate proceedings. For any case in which the testimony is not readily available electronically on a website, please provide a copy.

RESPONSE: Please refer to Mr. Novak's testimony and exhibits filed in TRA Docket 14-00146.

RESPONSIBLE WITNESS: Mr. Novak

REQUEST NO. 26: Is it Mr. Novak's contention that the Company's proposed DSM programs only benefit participants? Please explain.

RESPONSE: The Consumer Advocate objects to this request on the ground that it requires clarification before a complete and accurate response may be considered and seeks information that would require potentially inaccurate or unwarranted speculation at this point in this case. Without waving the objection, Mr. Novak would respectfully point out that his testimony does not attempt to identify any of the beneficiaries from the Company's proposed DSM program.

RESPONSIBLE WITNESS: Mr. Novak

REQUEST NO. 27: (a) Please explain how the heating degree days and cooling degree days used by Mr. Novak were computed. (b) What temperature is used for the degree day basis for heating and cooling degree days? (c) Is the average daily temperature used in the degree day calculation the average of 24 hourly values for each day, the average of the minimum and maximum temperature for each day, or something else?

RESPONSE: The heating and cooling degree days used by Mr. Novak represent the daily heating and cooling degree day information calculated by the National Oceanic and Atmospheric Administration ("NOAA") from 1985 to 2015 at the Bristol/Johnson City/Kingsport Tri-Cities Airport. The base temperature used for the calculation of

both heating and cooling degree days by NOAA is 65 degrees. Please refer to the workpapers provided in response to Request 1 above.

RESPONSIBLE WITNESS: Mr. Novak

REQUEST NO. 28: Refer to Dr. Klein's testimony at page 8, lines 9-22, regarding the TRA and TPSC applying "the so-called double leverage approach to capital structures for regulated subsidiaries of parent companies." (a) Please provide the name or style, date of filing, and docket number for every TRA or TPSC matter in which a double leverage analysis was applied by the TRA or TPSC in a case where the parent company had two or more subsidiaries. (b) In addition, please identify each and every regulated public utility to which the TRA and TPSC have applied the so-called double-leverage approach.

RESPONSE: The TRA or TPSC has applied the double-leverage approach in the dockets listed below (docket numbers are in parentheses). The listed companies comprise all of the companies to which the TRA or TPSC has applied double-leverage since 1986. There may have been dockets between 1995 and 2010 involving double-leverage or some variation, but Dr. Klein does not have any record of those dockets in which he did not testify.

Tennessee American Water Company, (11-00189), April 2011. Chattanooga Gas Company, (09-00183), April 2010. BellSouth D/B/A South Central Bell (95-02614) October 1995. United Telephone - Southeast (95-02615) September 1995. United Telephone - Southeast (93-04818) January 1994. Chattanooga Gas Company (93-06946) December 1993. South Central Bell (92-13527, et al) April 1993. Kingsport Power Co. (92-04425) October 1992. Chattanooga Gas Company (91-03765) October 1991. GTE South (91-05738) August 1991. United Intermountain Tel. Co.(90-07832) Dec. 1990. Kingsport Power Company (90-05736) Nov. 1990. AT&T - South Central States (90-07460) Oct. 1990. South Central Bell Tel. Co. (90-05953) August 1990.

GTE South (90-01273) June 1990.
Crockett Telephone Co. (89-02325) May 1989.
ALLTEL Tennessee (89-02324) May 1989.
West Tennessee Telephone Co. (89-02323) May 1989.
Peoples Telephone Co. (89-02322) May 1989.
Ooltewah-Collegedale Telephone Co. (89-02321) May 1989.
Kingsport Power Co. (89-02126) March 1989.
Chattanooga Gas Co. (88-01363) February 1989.
Tennessee-American Water Co. (U-87-7534) March 1988.
Tellico Telephone Co. (U-87-7532) February 1988.
Claiborne Telephone Co. (U-87-7508) November 1987.
Kingsport Power Co. (U-86-7472) May 1987.
United Cities Gas Co. (U-86-7442) February 1987.
General Telephone of the South (U-86-7437) Nov. 1986.

RESPONSIBLE WITNESS: Dr. Klein

REQUEST NO. 29: In reference to Dr. Klein's Exhibit 1, please provide the formulas for calculating the parent debt percentages and costs included in Exhibit 1, Double Leverage Capital Structure.

RESPONSE: Please see the attached Excel file containing Dr. Klein's formulas. Dr. Klein would note that the attachment shows a correction to the 2015 cost of Parent Short Term Debt, which Dr. Klein will address in his testimony at hearing. This Excel file was prepared in response to this discovery request.

RESPONSIBLE WITNESS: Dr. Klein

REQUEST NO. 30: Refer to Mr. Smith's testimony at pages 18-22; please provide a list, including the docket number and state, of all testimony in regulatory proceedings involving AEP electric operating companies in which Mr. Smith has recommended the exclusion from base rates of accounts receivable factoring expenses inclusive of customer uncollectible accounts expense. For any case in which the testimony is not readily available electronically on a website, please provide a copy.

RESPONSE: Mr. Smith does not recall there being any such testimony in regulatory

proceedings involving AEP electric operating companies and, further, has not been able to locate any in his files.

RESPONSIBLE WITNESS: Mr. Smith

REOUEST NO. 31: Refer to Mr. Novak's testimony at page 11; does Mr. Novak acknowledge that he excluded the Company's prepaid pension asset from rate base in his recommended level of prepayments in contrast to the Company's petition that includes prepaid pension asset in rate base?

RESPONSE: Mr. Novak acknowledges that his exhibits, schedules, and calculations do not include the referenced prepaid pension asset in rate base. Mr. Novak does not comment, in this response, whether or not the Company's inclusion of such amount was appropriate or correct in view of the absence of testimony as to why the Company would be prepaying such amounts.

RESPONSIBLE WITNESS: Mr. Novak

REQUEST NO. 32: Refer to Mr. Novak's testimony at page 13; please explain how accrued interest on customer deposits provides the Company with a source of non-investor supplied funds.

RESPONSE: As with Customer Deposits, Accrued Interest on Customer Deposits represents funds that are owed to the Company's customers. As such, they represent a source of non-investor supplied capital that the Company has available to finance utility service. Because Accrued Interest on Customer Deposits represents a source of non-investor supplied capital, it is an appropriate deduction to rate base.

RESPONSIBLE WITNESS: Mr. Novak

RESPECTFULLY SUBMITTED,

WAYNE M. IRVIN (BPR #30946)

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was served via U.S. Mail or electronic mail upon:

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This the 20th day of July, 2016.

Wayne M. Irvin

ATTACHMENT A

Dr. Klein Workpapers

							Kingsp	Kingsport Power Company	ampany				
	As of Dec. 31, 2011 Cost		As of Dec	As of Dec. 31, 2012	Cost	ږږ	As of Dec	As of Dec. 31, 2013	Cost	As of Dec. 31, 2014	Cost	As of Dec. 31, 2015	Cost
Short-Term Debt	476 0.		17342,3	17342,36 0.257693	93 0	116	19082.81	1 0.272769	0.0029	22038.62 0.300598 0.005932	0.005932	32296.78 0.394233	3 0.0081
Ione-Term Debt	20000 0.327814 0.0452		20000	0.297183	83 0.0452	52	20000	0.285879	0.0452	20000 0.272792	0,0452	20000 0.244132	2 0.0452
Preferred Stock	0		0	0		Ī	0	0		0		0	
Common Equity	29450 188 0 48271		29956.3	3 0.445125	25	I	30876.76	6 0.441351		31277.29 0.42661		29626.19 0.361635	2
Total Capital	-	1	67298.66	5		Γ	69959.56	6 1		73315.91		81922.97 1	
		i				ĺ							
KPC Only		2011	2012	2013	3 2014	14 2015	Average	[a					
	Short-Term Debt	0.189476	6 0.257693	3 0,272769	769 0.300598	598 0,394233	33 0.282954	4					
	Long-Term Debt	0.327814	4 0.297183		0.285879 0.272792	2792 0.244132	32 0.28556	91					
	Preferred Stock)				_		ा					
	Common Equity	0.48271	1 0.445125	5 0.441351		0.42661 0.361635	35 0,431486	91					
	Total Capital			1		+1	1	न					
							Ą	AEP Consolidated	ted				
	As of Dec. 31, 2011 Cost		As of Dec	As of Dec. 31, 2012	Cost		As of Dec	As of Dec. 31, 2013	Cost	As of Dec. 31, 2014	Cost	As of Dec. 31, 2015	Cost
Short-Term Debt	219		980602	980602.5 0.028837	15	116	757000	757000 0.021471	0.0029	1346000 0.036494	0.005932	800000 0.020882	2 0.0081
Jone-Term Deht	16548733 0.503562 0.0557		1778773	17787735 0.523084	-	162	1841472	18414723 0.522293	4	18716751 0.507463		19605564 0.511756	6 0.04984
Preferred Stock	ш		0	0			0	0		0		0	
Common Equity	14664230 0.446219		1523715	15237159 0.448079	179	Г	1608574	16085740 0.456236	10	16820254 0.456043		17904844 0.467362	2
Total Capital	32863329 1		34005496	1 96			35257463	1 1		36883005 1		38310409 1	
AEP Consolidated		2011	2012	2013	3 2014	14 2015	Average	a					
	Short-Term Debt	0.050219	9 0.028837	7 0.021471	171 0.036494	494 0.020882	82 0.03158	g.					
	Long-Term Debt	0,503562	0.523084	4 0.522293	293 0.507463	463 0.511756	56 0.513632	2					
	Preferred Stock	0	0	0	0	0	0						
	Common Equity	0,446219	9.0		0.456236 0.456043	5043 0.467362	0.4	∞ I					
	Total Capital	-	-	_			-	TÎ.					
							A	AEP, Inc. (Parent)	ent)				
	Ac of Dec 31 2011 Cost		Ac of Do	Ac of Dor 31 2012	Cost		Ac of Do	As of Day 31 2013	Cost	As of Dec. 31, 2014	Cost	As of Dec. 31, 2015	Cost
Short-Term Debt	690		321000	0.019162	22	416	57000	0.003331		602000 0.03280	0.032806 0.005932	125000 0.006597	
Long-Term Debt	558868.71 0.033549 0.07227		854798,4	4 0.051027	0.021088	.088	853502.	853502.5 0.049871	0.021088	852801.6 0.046474 0.021088	1 0.021088	847088.4 0.044707	7 0.021088
Preferred Stock	\vdash		0			П	0					0 0	
Common Equity	15132271 0.908382		15576113	13 0.929811	311		16203863	53 0.946799		16895346 0.92072		17975652 0.948696	٩
Total Capital	16658489 1	-1	16751911	T T			17114365	1 1		18350148 1		18947740 1	

 2011
 2012
 2013
 2014
 2015 Average

 0.058069
 0.019162
 0.003331
 0.032806
 0.006597
 0.023933

 0.038349
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 0.049871
 0.046474
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 0.908382
 0.92072
 0.94659
 0.94689
 0.930882

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 1

Short-Term Debt Long-Term Debt Preferred Stock Common Equity Total Capital

AEP, Inc. Parent-only

				2	2016 Projected Capital Structures	al Structures				
	Kingsport	ort		AEP Inc.	nc.	AEP Consolidated				
1	Capital	% Capital	Cap	Capital	% Capital	Capital % Capital				
Snort-Term Debt	40000	0.451513	844	_	0.040944					
Preferred Equity	0	0		0	0	0 0				
Common Equity	34467	0.389058	1878	18780914	0.911043	18704373 0.461017				
Total	88591	1	2061	20614742	1	40571998 1				
		- 1	ſ			ŀ				
202		2016 201	2011-15		AED Concolidated	2016 2011-15	AFD	AFP Parent-only	2016 % Capital	Average
NPC	ĩ	2 depta Average	200	. 1	ALT COMBONIDATED	(al clic cliny	0.040012	- 1
Short-Term Debt		0.159429 0.282954	2954			_			0.040013	
Long-Term Debt		0.451513 0.28	8556			0.505634 0.513632			0.040944	0.045125
Preferred Equity		0 389058 0 43	0.431486			0.461017 0.454788			0.911043	0.930882
Total			1						1	1
		12								
			2011-15	-15		Bourke	é	Γ		
Double Leverage			2016 Average	age		Double Leverage		1		
Short-Term Debt		0.1	0.159429 0.282954	32954		Short-Term Debt	Ö	0.0279		
Long-Term Debt		0.4	0.451513 0.2	0.28556		Long-Term Debt	0	0.5478		
Preferred Equity			0	0		Preferred Equity		0		
Common Equity						Common Equity	0.	0.4243		
•	Parent STD	0.0	0.01868 0.01	0.010353		2015 Parent STD		0.002799		
	Parent LTD	0.0	0.01593 0.019471	19471		2015 Parent LTD		0.018969		
	Parent Equity	0.3	0.354448 0.40	0.401662		2015 Parent Equity		0.402532		
				Ī						

CPAD 1-46 Attachment 1 and CPAD 1-47 Attachment 1 KgPCo Exhibit No. 1 (PMB)

KPC		2011	2012	2013	2014	2015	2016
	STD	0.505%	0.416%	0.290%	0.593%	0.810%	1.35%
	LTD	4.520%	4.520%	4.520%	4.520%	4.520%	3.94%

2011	2012	2013	2014	2015	2016	Bourke Recommended
0.505%	0.416%	0.290%	0.593%	0.810%	1.35%	0.29%
4.520%	4.520%	4.520%	4.520%	4.520%	3.94%	3.94%
2011	2012	2013	2014	2015	2016	
0.505%	0.416%	0.290%	0.593%	0.810%	na	
2.570%	5.462%	5.335%	5.233%	4.984%	na	

AEP Cons STD LTD

AEP Parent	2011	2012	2013	2014	2015	2016
STD	0.505%	0.416%	0.290%	0.593%	0.810%	1.35%
LTD	7.227%	2.109%	2.109%	2.109%	2.109%	2.11%

CPAD 1-46 Attachment 1 CPAD 1-47 KgPCo Exhibit No. 1 (PMB)

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		2015 Parent STD	2015 Parent LTD	2015 Parent Equity
Short-Term Debt Long-Term Debt Preferred Equity	Common Equity			

_	DOULKE	20	2012
-	Proportion	Cost Rate	Wtd. Cost
_	0.0279	0.29	0.008091
-	0.5478	3.94	2.158332
_	0	0	0
-	0.4243		0
_	0.002799	1.35	0.003779
	0.018969	2.109	0.040006
_	0.402532	8.8	3.542282
	1		5.752489

Boul	Bourke Recommended	nded	
	Proportion Cost Rate Wtd. Cost	Cost Rate	Wtd. Cost
Short-Term Debt	0.0279	0.29	0.29 0.008091
Long-Term Debt	0.5478	3.94	2.158332
Preferred Equity	0	0	0
Common Equity	0.4243	10.66	10.66 4.523038
	1		6.689461

8	Bourke Corrected	ed	
	Proportion	Cost Rate Wtd. Cost	Wtd. Cost
Short-Term Debt	0.0279	0.29	0.29 0.008091
Long-Term Debt	0.5478	3.94	2.158332
Preferred Equity	0	0)
Common Equity	0.4243	9.594921	4.071125
	1		6.237548