DIRECT TESTIMONY OF WILLIAM K. CASTLE ON BEHALF OF KINGSPORT POWER COMPANY D/B/A AEP APPALACHIAN POWER BEFORE THE TENNESSEE PUBLIC UTILITY COMMISSION DOCKET NO. 21-00107

1	Q.	PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND POSITION.
2	A.	My name is William K. Castle. My business address is 1051 E. Cary St., Suite 1100,
3		Richmond, Virginia. I am the Director of Regulatory Services VA/TN for KgPCo.
4	Q.	PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND
5		BUSINESS EXPERIENCE.
6	A.	I earned a Bachelor of Science degree in Mechanical Engineering from Tulane University
7		in 1988, and a Masters of Business Administration degree from the University of Texas -
8		Austin in 1998. I hold the Chartered Financial Analyst (CFA) designation. From 1988-
9		1996, I was a United States Naval Officer. I have worked in the utility industry since
10		1998, beginning with the Columbia Energy Group, Herndon, Virginia, where I held
11		positions in financial planning and corporate finance. Subsequent to the acquisition of
12		Columbia Energy Group by Merrillville, Indiana based NiSource in 2000, I performed
13		financial planning and analysis functions. Since 2004, and prior to my current position, I
14		was employed by American Electric Power Service Corporation (AEPSC) in the
15		Corporate Planning and Budgeting department. I have been in my current position since
16		July, 2014.
17	Q.	HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY AS A WITNESS
18		BEFORE ANY REGULATORY COMMISSION?
19	A.	Yes. I presented testimony on behalf of KgPCo in Docket Nos. 16-0001, 17-00032, 18-
20		00038 and on behalf of APCo before the Virginia State Corporation Commission, most

recently in Case Nos. PUR-2020-00015, PUR-2020-00117, PUR-2020-00135 and PUR-1 2 2021-00047. I have also presented testimony in the states of Ohio, Oklahoma, Indiana, West Virginia, and Arkansas. 3 4 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING? 5 A. I summarize the Company's request in this case and support the request for an ROE of 6 10.2% and the termination of the Company's Rider RTODR. I also sponsor the 7 Company's tariff, and I support a 5-year amortization period for certain non-recurring 8 expenses. ARE YOU SPONSORING ANY EXHIBITS? 9 Q. 10 Yes. I am sponsoring the following exhibits: A. KgPCo Exhibit No. 1 (WKC): KgPCo Retail Rates National Comparison 11 KgPCo Exhibit No. 2 (WKC): KgPCo Residential Rates Local Comparison 12 KgPCo Exhibit No. 3 (WKC): KgPCo Red-line Tariff 13 14 KgPCo Exhibit No. 4 (WKC): Peer Group Screening Results KgPCo Exhibit No. 5 (WKC): Peer Group Beta 15 KgPCo Exhibit No. 6 (WKC): CAPM Results 16 17 KgPCo Exhibit No. 7 (WKC): DCF Earnings Growth Assumptions 18 KgPCo Exhibit No. 8 (WKC): DCF Dividend Yield Assumptions 19 KgPCo Exhibit No. 9 (WKC): DCF Cost of Equity Estimates 20 KgPCo Exhibit No. 10 (WKC): ROE Recommendation 21 KgPCo Exhibit No. 11 (WKC): Peer Group Earned Returns ARE YOU SPONSORING ANY MFRS? 22 Q. Yes. I am sponsoring the following MFRs: 1-3, 5, 9, 23, 28, 37, 48, 62-66, and 82. 23 A.

1 Q. BRIEFLY SUMMARIZE THE COMPANY'S PROPOSAL.

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- A. Based on a test year ending June 30, 2021 and a 2022 attrition year, the Company is seeking an increase in its distribution base revenues of \$5.5million over the levels approved in Docket No. 16-0001, when adjusted for the reduction in Federal taxes that occurred in the interim. The request, if approved, will result in a 4.7% increase in aggregate increase revenue requirements when including the proposed treatment of the Company's active riders. In addition, the Company is seeking to:
 - Transition the Company's two Street Lighting (SL) special contracts to the Company's tariff
 - Apportion revenues between classes consistent with industry practice
 - Close the Company's current voluntary Residential Tariff R.S.-T.O.D. to new customers and introduce a similar voluntary Residential Smart Time of Day schedule that utilizes the capabilities of AMI meters.
 - Introduce a voluntary Electric Vehicle charging rate schedule.
 - Introduce a voluntary renewable energy rider, Rider REC, for customers who wish to source some or all of their energy from renewable resources.
 - Set the level of storm expense and forestry and other circuit and station improvement expenses in base rates at the test year level. Because the TRP&MS rider separately captures costs above and below these amounts, this change has no impact on the amount of related expense ultimately recovered from customers.
 - Update certain Terms and Conditions of Service, as well as the Company's Underground Policy
 - Recover certain costs related to the COVID-19 pandemic
 - Incorporate the amortization of Protected ADIT into base rates, reduce the federal income tax rate from 35% to 21% in base rates, and set Rider FTRAR to \$0.
 - Adjust the Company's rate base for tax credits related to net operating losses that cannot be currently realized to avoid a tax normalization violation.
 - Terminate the Rider RTODR. The Company may propose a peak-shaving program that will more effectively reduce costs for Kingsport customers and recover costs through the FPPAR.
 - Terminate the Storm Damage Rider (Rider S.D.R.), as it was made redundant with the Commission's approval of the TRP&MS Rider.

2	I.	REVENUE REQUIREMENT
3	Q.	THE COMPANY LAST SOUGHT AN INCREASE IN ITS BASE RATES IN 2016.
4		PLEASE UPDATE THE TPUC ON THE COMPANY'S ACTIVITIES IN THE
5		INTERIM.
6	A.	The Company has made significant investments in its distribution infrastructure. Most
7		notably, the Company replaced its aging AMR meters with AMI meters in 2019. AMI
8		meters are now the industry standard, making the decision to switch to that platform the
9		logical one as the AMR meters neared the end of their useful lives. AMI meters
10		incorporate two-way communications and as a result have a variety of reliability benefits
11		and enable certain customer programs, which I will discuss further. Company witness
12		Walker describes the need to replace the AMR meter fleet as well as the benefits the
13		Company sees with the AMI meters. He also discusses the Company's reliability and
14		continued efforts to provide improved customer experience.
15	Q.	THE COMPANY IS SEEKING AN INCREASE IN ITS ANNUAL REVENUE
16		REQUIREMENT OF \$5.5MILLION RELATIVE TO THE BASE RATE
17		REVENUES GRANTED IN DOCKET NO. 16-0001 BUT THE COMPANY'S
18		RATE DESIGN REFLECTS AN INCREASE OF \$14.4 MILLION. PLEASE
19		EXPLAIN THE DIFFERENCE BETWEEN THE TWO NUMBERS.
20	A.	First, the Company's test year (July 2020-Jun 2021) adjusted base rate revenues of \$22.6
21		million were \$4.2 million less than the \$26.8 million that rates were designed to collect.
22		Approximately \$1.4 million of that difference is attributable to the reduction in federal
23		taxes associated with the TCJA. The remaining difference of approximately \$2.8 million

• Request that the Company be authorized to earn 10.2% on equity.

resulted primarily from loss of load. Finally, the Company is folding in the test year level 1 of Rider TRP&MS of \$6.0 million into base rates. Adding the loss of load, TRP&MS 2 roll-in, and the increase relative to the 2016 case, the Company's rate design is based on a 3 4 \$14.4 million increase to test-year level base rates. 5 O. WHAT WILL BE THE IMPACT ON CUSTOMERS? 6 A. Folding the test-year level of TRP&MS revenues into base rates of \$6.0 million will not 7 have an impact on customers. In fact, as I will discuss further, the Company is proposing to zero-out the rates on its TRP&MS rider at the time distribution base rates go into 8 9 effect. Because the current TRP&MS rates (Docket No. 20-00127) are designed to 10 collect \$7.5 million, this will reduce aggregate rates by \$1.5 million until the TRP&MS 11 rates are once again trued-up to actuals. The resultant net increase to customers is \$6.8 million, relative to the test year. 12 13 This number is comprised of the following: 14 • the loss of load since the 2016 case (+\$2.8 million) • the proposed increase over the 2016 revenues adjusted for the TCJA 15 (+\$5.5 million) 16 • the zeroing out of the TRP&MS rider (-\$7.5 million) 17 • the folding in of the test year level of TRP&MS revenues (+\$6 million) 18 A \$6.8 million increase in the revenue requirement is a 4.7% increase of the total revenue 19 20 requirement. 21 The Company is also proposing a revenue apportionment methodology that is 22 consistent with electric industry practice. This proposed change in methodology and the 23 loss of a significant industrial customer results in a relatively higher revenue 24 apportionment to the residential class. With all factors considered, the Company's

1		proposal results in a 6.9% increase in the bill of a typical residential customer using 1000
2		kWh/month. Company witness Ward sponsors the calculation of the proposed revenue
3		apportionment and Company witness Walsh sponsors the rate design.
4	Q.	ARE KGPCO RESIDENTIAL RATES COMPETITIVE WITH COSTS FOR
5		ELECTRICITY IN TENNESSEE AND THE UNITED STATES?
6	A.	Yes. KgPCo residential customers enjoy some of the lowest rates for electricity in the
7		nation (16 out of 144 in the January 2021 EEI survey). The Company's proposed
8		increase would move KgPCo residential customers from the cusp of the lowest (tenth)
9		decile to the ninth decile nationally absent any increases in national rates (KgPCo Exhibit
10		No. 1 (WKC)). Further, KgPCo residential rates with the proposed increase would
11		remain lower than the average rates in the surrounding communities in Tennessee
12		(KgPCo Exhibit No. 2 (WKC)).
13	Q.	WHAT ARE THE MAJOR DRIVERS OF THIS REQUESTED INCREASE?
14	A.	It has been nearly six years since the Company last sought an increase in its rates for
15		distribution service. In addition to the replacement of AMR meters with AMI meters, the
16		Company has experienced typical inflation of costs for salaries, wages, and other
17		normally incurred items. Additionally, the Company must change the way it accounts for
18		certain net operating losses that impacts the calculation of rate base, as discussed by
19		Company witness Criss. Finally, the Company is requesting to discontinue Rider
20		RTODR, which reduces the revenue requirement by \$373,706 annually, consisting of
21		\$114,477 of annual amortization expense associated with a regulatory asset and \$259,229
		\$114,477 of almual amortization expense associated with a regulatory asset and \$257,227
22		of on-going annual expense.

1	Q.	WHAT ADJUSTMENTS FROM THE TEST YEAR TO THE ATTRITION YEAR
2		IS THE COMPANY PROPOSING?
3	A.	The Company is proposing limited adjustments from the test year to the attrition year.
4		These adjustments include increases associated with wage inflation, normalized sales
5		volumes, tax policy and current work processes. The adjustments are sponsored by
6		Company witnesses Allen, Keeton, Criss, and Walsh.
7	Q.	HOW HAS THE COMPANY ACCOUNTED FOR COSTS ASSOCIATED WITH
8		COVID -19 FROM THE TEST YEAR TO THE ATTRITION YEAR?
9	A.	The Company has deferred certain costs associated with the implementation of safety
10		protocols necessary to adapt to working conditions during the pandemic. It is seeking to
11		recover these costs from customers over five years. These amounts are sponsored by
12		Company witness Allen.
13	Q.	IS THE COMPANY REQUESTING RECOVERY OF OTHER NON-
14		RECURRING EXPENSES?
15	A.	Yes. The Company is requesting to recover expenses related to the filing of this base rate
16		case over five years. Company witness Allen sponsors that estimate.
17	Q.	HOW IS THE COMPANY PROPOSING TO APPORTION THE REVENUE
18		REQUIREMENT BETWEEN RATE CLASSES?
19	A.	Consistent with industry practice, the Company is proposing to apportion revenues to the
20		classes consistent with a class cost of service study. The methodology objectively
21		assigns costs to the customer classes that have caused those costs to be incurred. The
22		need for an objective methodology is particularly apparent when there is a significant

- change in the make-up of the customer classes, as has occurred in KgPCo's service
- 2 territory. Company witness Ward sponsors the proposed methodology.

3 Q. TPUC HAS TRADITIONALLY APPORTIONED REVENUE INCREASES TO

4 THE TARIFF CLASSES ON THE BASIS OF THEIR CURRENT REVENUES.

SHOULD THE TPUC GIVE CONSIDERATION FOR USING A CLASS COST

OF SERVICE IN THIS CASE?

Yes. The logic of assigning revenues proportionately to the tariff classes rests on the foundation that the underlying, existing revenues are apportioned correctly. If the underlying revenues are not representative of the underlying costs, a strict revenue apportionment based on current revenues will only exacerbate any inequities that have built up over time.

12 Q. IS THERE ANY EVIDENCE THAT KGPCO'S CURRENT REVENUE

APPORTIONMENT IS OUT OF BALANCE?

A. Yes. EEI puts out a biannual survey of utility rates. KgPCo's residential rates are considerably less than rates for other investor-owned utilities in the geographic area, while its industrial rates are higher than average (see Figure 1). This suggests that the current revenue apportionment is out of step with the region.

Figure 1. EEI January 2021 Survey Excerpt

									%
									Above/(below)
			E	ast South		South			East South
Class	Consumption	Kingsport		Central	-	Atlantic		USA	Central
Residential	1000 kWh	\$ 101.99	\$	115.60	\$	118.50	\$	137.37	-13%
Commercial	500kW; 185,000kWh	\$ 17,096	\$	18,611	\$	16,286	\$	18,377	-9%
Commercial	40kW; 14,000 kWh	\$ 1,504	\$	1,598	\$	1,348	\$	1,587	-6%
Industrial	1000 kW; 400,000 kWh	\$ 36,623	\$	34,341	\$	32,958	\$	37,928	6%
Industrial	50,000 kW; 25,000,000 kWh	\$ 1,765,266	\$	1,704,157	\$:	1,690,258	\$2	,026,081	3%

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Q. 1 ARE THERE PRACTICAL REASONS TO ENSURE THAT INDUSTRIAL 2 RATES ARE COMPETITIVE? Yes. The industrial customers in KgPCo's service territory are the area's major 3 A. 4 employers. Their sustainability is not only important for the City of Kingsport and the surrounding area but their continued operation will help keep rates below the regional 5 6 and national averages. 7 Q. IS THE COMPANY PROPOSING A REVENUE APPORTIONMENT CONSISTENT WITH THE CLASS COST OF SERVICE? 8 9 A. Yes. However, the Company sought to limit the impact of the change to any individual 10 customer rate class. In this regard, the limit on an increase was capped at 1.5x the 11 percentage increase to aggregate rates (a maximum increase of 7.03%), and lower bound, 12 or floor, was set on the percentage increase to the other classes. The floor was set so that 13 the minimum increase to aggregate rates was 1.70% for the industrial class and 3.40% for 14 the other classes. Thus, the cost of service formed the basis for the revenue 15 apportionment but large changes for rate classes are not being proposed. 16 Q. WHAT RETURN ON EQUITY IS THE COMPANY REQUESTING? A. The Company is requesting a return on equity of 10.2%. I support this request later in 17 18 my testimony. Company witness Messner supports the capital structure and the resultant 19 return on rate base of 6.36%. II. 20 TARIFF SCHEDULES PLEASE DESCRIBE THE STREET LIGHTING RATE SCHEDULE. 21 0.

The Street Lighting (SL) class has been subject to contract rates in place since at least the

1990's. The rates contained in those SL contracts are not only out of date, but do not

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reflect the current billing construct, including being subject to the FPPAR and TRP&MS 1 riders. In the Company's last base rate case (Docket No. 16-00001), a share of the 2 granted increase in distribution revenues was apportioned to that class of customers by 3 4 the TPUC. Additionally, both the FPPAR and TRP&MS riders apportion revenues to that class. Thus, those base rate and rider costs are not being paid, explicitly by the SL 5 6 class. Further, the contract rates do not reflect current plant balances or fuel costs. 7 Finally, because the lighting industry is transitioning to LED lights and away from sodium lights, it is necessary to incorporate new lighting options and eliminate others. In 8 9 short, the time to move away from the Street Lighting contracts and incorporate Street 10 Lighting into its own tariff schedule is overdue. Company witness Walsh sponsors the 11 proposed SL schedule. Q. FOR WHICH OTHER NEW PROGRAMS IS THE COMPANY SEEKING 12 13 APPROVAL? With the installation of AMI meters, the Company is able to offer multiple voluntary 14 A. 15 programs for customers that can save them money. These include a RS-TOD rate 16 described by Company witness Walsh, an Electric Vehicle Charging rate and a voluntary renewable energy rider, supported by Company witness Keeton. These proposed rate 17 18 schedules are included in KgPCo Exhibit No. 3 (WKC). PLEASE EXPLAIN WHY THE COMPANY IS REQUESTING TO 19 Q. DISCONTINUE RIDER RTODR. 20 21 A. Rider RTODR was approved by the TPUC (formerly TRA) in 2012 (Docket 12-00012) 22 to serve as a relatively economical source of capacity for KgPCo customers. Emergency 23 demand response, or the ability for customers to reduce load in times of an RTO

emergency, is equivalent, in a planning sense, to having generation standing by to turn on 1 2 and meet load in an emergency. In the period since 2012, the RTO, PJM, has updated its rules to include significant penalties for non-performance in emergencies. Prior to the 3 4 imposition of penalties, demand response assets who did not perform were simply not paid. Unlike fossil resources, insurance to mitigate the impact of non-performance is not 5 6 available for demand response resources. Because of this, capacity planners including 7 the AEP Companies, are reluctant to use demand response as a resource in their annual plans, preferring instead, reliable (and insurable) fossil generation. As a result of the new 8 9 rules in PJM, the demand response resources associated with KgPCo customers are not 10 being fully utilized. 11 Q. WHAT IS THE COMPANY PROPOSING? The Company is proposing to end the program at the end of the 21/22 delivery year (May 12 A. 13 31, 2022). Q. WILL KGPCO CUSTOMERS THAT ARE CURRENTLY PARTICIPATING IN 14 15 RIDER D.R.-R.T.O STILL BE ALLOWED TO PARTICIPATE IN PJM DEMAND 16 **RESPONSE PROGRAMS?** A. Yes. Through the arrangement in place today, participating customers work directly with 17 18 a CSP, KgPCo compensates the CSP and APCo is able to use the resource in its capacity 19 plan. Under the Company's proposal, the CSP will be responsible for finding another buyer for the capacity or alternatively, participating in the annual PJM capacity auction. 20 IS THE COMPANY PROPOSING A REPLACEMENT PROGRAM? 21 0. 22 A. Not at this time. The Company may propose a "peak shaving" program, with cost

recovery of actual costs in a subsequent filing of its FPPAR. Peak shaving is

1		distinguished from emergency demand response in that it targets times of peak usage that
2		if employed successfully, result in decreased transmission and generation costs instead of
3		being used as a generating capacity resource. Recovering the costs of such a future
4		program in the FPPAR will match the costs and benefits in the same recovery
5		mechanism.
6	Q.	THE COMPANY IS PROPOSING TO INCLUDE NEW REFERENCE AMOUNTS
7		OF TRP&MS COSTS IN BASE RATES. WILL THIS AFFECT THE AMOUNT
8		THE COMPANY SPENDS ON THE PROGRAM, OR THE AGGREGATE
9		AMOUNT COLLECTED FROM CUSTOMERS THROUGH ALL
10		MECHANISMS?
11	A.	No. TRP&MS costs are tracked independently and trued up to revenues annually. By
12		assigning a different level to base rates, there will be a corresponding and offsetting
13		change to the TRP&MS Rider. The sole issue becomes one of timing of the increase in
14		base rates associated with incorporating the new reference points and the corresponding
15		reduction to the Rider. With regard to capital, the Company will use the attrition year
16		estimate provided by Company witness Walker of \$12.8 million as the point from which
17		to include subsequent additions in the TRP&MS rider.
18	Q.	WHAT IS THE COMPANY'S PROPOSAL WITH REGARD TO THE CURRENT
19		TRP&MS RIDER, ONCE THE COMPANY'S BASE RATES THAT INCLUDE
20		THE HIGHER LEVEL OF TRP&MS COSTS TAKE EFFECT?
21	A.	In order to avoid having customers pay a higher level in base rates and a similar amount
22		in the TRP&MS rider simultaneously, the Company proposes to change the rates of the
23		TRP&MS rider to \$0 at the time base rates go into effect. The rates for the TRP&MS

rider can be reset at the point of the subsequent annual TRP&MS filing using the new 1 2 basing points and the balances at that time. 3 WHAT IS THE COMPANY PROPOSING WITH REGARD TO THE STORM Q. 4 **DAMAGE RIDER?** 5 A. The Company is proposing to eliminate the Storm Damage Rider. This rider is not 6 currently collecting revenues and has been made redundant by the approval of the 7 TRP&MS Rider. 8 Q. WHAT IS THE COMPANY'S PROPOSAL WITH REGARD TO ITS FTRAR? 9 A. The TPUC approved the FTRAR in 2018 (18-00038) to incorporate the effects of the 10 TCJA. The rider reduces base rates by a set percentage (currently 5.3953%) that accounts for the return of "protected" accumulated deferred federal income taxes to 11 customers as well as the change in the federal corporate income tax rate from 35% to 12 21%. In this case, the Company is proposing to incorporate these amounts into base 13 14 rates, and set the credit or charge amount of the rider to 0%. This change will have no 15 impact on the amount customers pay for electricity. 16 Q. WHY IS THE COMPANY NOT PROPOSING TO ELIMINATE THE RIDER? The rider may be useful in the future to accommodate future tax changes, whether those A. 17 18 are increases or decreases. Preserving the capability within the Company's billing

system, at least in the short-term, avoids future programming and costs.

III. RETURN ON EQUITY

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2 Q. WHAT RETURN ON EQUITY IS THE COMPANY REQUESTING?

A. The Company is requesting an ROE for the attrition period of 10.2%. In support of this request, I have performed multiple analyses. These are the CAPM, the DCF model, and a peer group analysis of actual returns.

6 O. WHY IS IT IMPORTANT THAT THE TPUC AUTHORIZE A FAIR ROE?

A. The cost of equity should reflect the return investors require based on the risks of the subject company and the returns available for comparable investments. The United States Supreme Court has established the guiding principles for establishing a fair return in previous cases. Two Supreme Court cases that are typically cited as the basis for authorizing a fair return on equity: Two Supreme Court cases that are typically cited as the basis for authorizing a fair rate of return on equity are: *Bluefield Water Works v. Public Service Commission* (1923)¹ and *Federal Power Commission v. Hope Natural* Gas (1944).² The *Bluefield* decision held that

A public utility is entitled to such rates as will permit it to earn a return on the value of the property it employs for the convenience of the public equal to that generally being made at the same time and in the same region of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties, but it has no constitutional right to profits such as are realized or anticipated in highly profitable enterprises or speculative ventures.

22 And

The return should be reasonably sufficient to assure confidence in the financial soundness of the utility, and should be adequate, under efficient

¹ Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n of W.Va., 262 U.S. 679 (1923) ("Bluefield").

² Fed. Power Comm'n v. Hope Nat. Gas Co., 320 U.S. 591 (1944) ("Hope").

and economical management, to maintain its credit and enable it to raise 1 2 the money necessary for the proper discharge of its public duties. The *Hope* decision held 3 The return to the equity owner should be commensurate with returns on 4 5 investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial 6 integrity of the enterprise, so as to maintain its credit and attract capital. 7 8 And. It is the end result that is important and not the methods used to arrive at 9 10 the rates. 11 In short, the ROE should be set so that the utility's shareholders have a reasonable 12 expectation that they will be fairly compensated for their risk. To determine the ROE 13 that corresponds to that level of risk, given current market conditions is the object of my 14 analysis and testimony. IS THE RISK OF KGPCO'S EQUITY DIRECTLY OBSERVABLE? 15 Q. A. No. The parent company of KgPCo, AEP, owns 100% of the stock of KgPCo, as such, it 16 is not publically traded. AEP is a geographically diverse electric utility with regulated 17 and unregulated business activities. In order to estimate the risk of KgPCo, it is necessary 18 19 to develop a proxy group of publically traded companies that investors would consider as 20 risk comparable. Similarly, KgPCo's debt is also held by AEP and not separately traded 21 or rated. 22 Q. HOW DID YOU DETERMINE THE APPROPRIATE PROXY GROUP? 23 A. In order to reflect the risks and prospects associated with KgPCo's utility operations, my 24 analysis focuses on a reference group of other utilities composed of those companies in 25 Value Line's electric utility industry group that has:

1 2 3		1. Corporate credit ratings from S&P and Moody's that are consistent with AEP's current credit ratings. I selected companies whose ratings were within one notch of APCo's Baa1 rating or A- to Baa2.
4		2. A Value Line Safety Rank of "1" or "2".
5		3. Value Line Financial Strength rating of "B++" or better.
6		4. No ongoing involvement in a merger or material acquisition or sale.
7 8		5. Paid dividends and had no significant change in dividend policy in the prior six months.
9		These criteria result in a proxy group composed of 24 companies, which I refer to as the
10		Peer Group. The Value Line Electric Utility group and peer group is KgPCo Exhibit No
11		4 (WKC).
12	Q.	WHAT ROLE DOES THE CAPITAL STRUCTURE PLAY IN THE RISKINESS
13		OF THE ENTERPRISE?
14	A.	Generally, the more debt in the capital structure, the riskier it is for equity holders. This
15		is because the enterprise must generate sufficient revenues to cover interest expense or
16		face default. The more debt in the capital structure, the more likely it is that a shortfall
17		could occur, triggering a default and possible loss of shareholder equity.
18	Q.	IS KGPCO MORE OR LESS RISKY THAN THE PEER GROUP?
19	A.	It is neither more nor less risky than the peer group. KgPCo's capital structure is typical
20		for the industry. Credit ratings are assigned by independent rating agencies in order to
21		provide investors with a comprehensive and objective view of the Company's
22		creditworthiness, a key measure of the firm's risk. Because the peer group is composed
23		of electric utilities with similar credit ratings, this measure indicates that APCo and by
24		association, KgPCo and the peer group are of comparable risk.
25		Similarly, the Value Line Safety Rank is a further refinement to the credit rating
26		agency screen. The Safety Rank, which ranges from "1" (safest) to "5" (riskiest) is an

1		overall measure that captures the total risk of a stock and incorporates elements of stock
2		price volatility and credit metrics. Because AEP, and by association, KgPCo has a Safety
3		Rank consistent with the peer group, it is another indication that the peer group
4		reasonably approximates the risk of KgPCo.
5	Q.	WITH A PEER GROUP OF COMPANIES ENGAGED IN SIMILAR BUSINESS
6		AND INCURRING SIMILAR RISKS ESTABLISHED, HOW DID YOU
7		PROCEED TO DETERMINE THE APPROPRIATE LEVEL OF EQUITY
8		RETURNS?
9	A.	I performed two standard cost of equity analyses: the CAPM and the DCF. Additionally,
10		I demonstrate that these analyses suggest an allowed return in-line with ROEs that have
11		been earned for regulated utilities.
12	Q.	WHAT IS THE THEORY BEHIND THE CAPM FOR PURPOSES OF
13		DETERMINING AN AUTHORIZED ROE?
14	A.	The CAPM is a construct that seeks to determine an "expected return" of an asset on the
15		basis of risk relative to the market. If the asset is deemed more risky than the market as a
16		whole, then it should expect to earn higher returns, and vice-versa. The model consists of
17		three components: the risk-free rate, the market risk premium, and "beta", and is
18		expressed as
19		$E[R] = r_f + \beta x (R_m - r_f)$, where
20		E[R] is the "expected return" or "cost of equity" or "required return on equity"
21		(ROE)
22		rf is the return on a risk-free asset

 β (beta) is the measure of an asset's risk relative to the market. It can be thought of as a measure of the expected change in an asset price that corresponds to a change in the market price. By definition the market as a whole has beta coefficient of 1.0. A company stock with a beta of less than 1.0 would exhibit returns less volatile than the market while a company stock with a beta greater than 1.0 would exhibit greater volatility than the market. As stock with a beta of "1" moves in lockstep with the market.

Rm is the "market return"

Rf is the "risk-free rate"

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 $(Rm-r_{\rm f})$ is the excess return of the market over the return of a risk free asset or "market risk premium".

Q. WHAT DID THE COMPANY USE FOR ITS RISK-FREE RATE?

The risk-free rate is almost always the return on a U.S. Treasury bill or bond for the purposes of security analyses. Picking the tenor of the underlying asset can be debatable with arguments for the most appropriate ranging from a three-month T-Bill rate to the rate for a 30-year bond. While the 30-day maturity T-Bill is universally accepted as a truly risk-free asset, the 30-year Treasury rate is a typical, if not conservative time horizon for utility investments. Further, the Federal Reserve's decade-long policy of artificially keeping borrowing costs at or near 0% have made the use of short-term rates in analyses potentially distortionary. Additionally, since the ROE is being set for prospective periods, it is appropriate to use a projected treasury rate in the analysis. I have provided analysis using both current and projected 30 day and 30 year rates. The difference in approaches resulted in a maximum difference of 25 basis points between the lowest (current 30-day T-Bill) and the highest (projected 30-year T-Bond) method.

Q. HOW DID THE COMPANY DETERMINE BETA?

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2 A. To determine beta, the Company examined the individual betas of the peer group of electric utilities to determine the risk of the industry as a whole. Betas for publically 3 4 traded companies can be calculated by statistical analysis of each stock's returns relative to the market for a given time period. Value Line does this calculation periodically and 5 publishes betas for various industry segments quarterly. In my analysis, I used the Value 6 7 Line betas as they are considered to be an impartial resource for investors. Finally, I calculated both the weighted average beta of the peer group using market capitalization 8 9 and the median to determine industry betas. The peer group constituents, their market 10 capitalizations, and their Value Line betas are shown in KgPCo Exhibit 5 (WKC). The peer group weighted-average beta is 0.89 and the median in 0.90. 11

Q. HOW DID THE COMPANY DETERMINE THE EXPECTED MARKET RETURN AND THE MARKET RISK PREMIUM?

The market risk premium can be excess return of the market over the risk-free rate. To determine the Expected Market Return and the Market Risk Premium, I examined the universe of dividend paying stocks in Value Line of approximately 916 publically traded companies. I looked at their 3-5 year earnings growth estimates as determined by Value Line and added their dividend yield to determine the Expected Market Return. I removed from the universe any stocks that had an expected market return greater than 20%, which reduced the universe to 825 stocks. I weighted that list of stocks by their market capitalization to determine the Expected Market Return of 12.9% at a Beta of 1.0. I also calculated the median expected return of the Value Line universe of stocks, which yielded 11.3%. The Market Risk Premium is determined by subtracting the risk-free rate

1		from the Expected Market Return. For the various iterations, using a weighted average
2		approach, the median approach and the four risk-free rate approaches, the market risk
3		premium ranged from 8.94% to 12.78%.
4	Q.	WHY DID YOU CALCULATE BOTH A MARKET WEIGHTED AVERAGE
5		AND A MEDIAN FOR BOTH THE EXPECTED MARKET RETURN AND THE
6		PEER GROUP BETAS?
7	A.	For purposes of determining a return that is representative of the market as a whole, the
8		constituent stocks must be weighted to determine their relative contribution to the market
9		The "market" is not an equal weighting of stocks and thus, when estimating statistics that
10		are representative of the market, it is important to weight the constituents. That said,
11		market weightings can be heavily influenced by a handful of "mega-cap" stocks. To
12		provide prospective, the use of the median to determine the characteristics of a "typical
13		stock" is instructive and I have given it equal weight in the analysis.
14	Q.	WHAT IS THE RESULT OF THE CAPM ANALYSIS WITH THE
15		CONSTITUENTS?
16	A.	The CAPM yields an expected return for utility stocks that ranged from 10.1% to 11.85%
17		with an average of all the various methods of 10.97%. These results can be found in
18		KgPCo Exhibit 6 (WKC).
19	Q.	WHAT IS THE THEORY UNDERLYING THE DISCOUNTED CASH FLOW
20		MODEL?
21	A.	Investors expect to receive stock dividends (cash), now and into the future. They also
22		have an expectation about the growth of those dividends. Taken together, an investor

will "discount" estimated future dividends by the cost of equity to arrive at a fair price for a stock.

- This is expressed as $P_0 = D_1/(k_e-g)$,
- 4 where: P_0 = the current price of the stock
- 5 D_1 = the expected dividend in the subsequent period
- $k_e = cost of equity$
- g = long-term growth expectation
- 8 The equation can be rearranged to:

$$9 k_e = D_1/P_0 + g$$

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Which is the expected dividend yield plus the long-term expected growth rate.

11 Q. HOW DID YOU DETERMINE THE THREE VARIABLES (P_0 , D_1 , g)?

A. For the peer group, the value P₀ is the average of stock prices for the 13-week period coinciding with the publication or calculation of the growth estimates (g) and the announced or expected dividends (D₁). While the stock price and current dividend are observable, the future growth is not. To provide a robust measure of expected growth, I examined projected growth rates from three sources: Value Line, Zack's and Yahoo!.

Q. PLEASE DESCRIBE THE PROJECTED GROWTH RATE APPROACH.

A. To determine the expected growth of dividends, investors typically rely on the estimates
of Wall Street analysts who are familiar with and have deeply researched those individual
stocks. Analysts typically estimate earnings growth, and not dividend growth. However,
if a constant dividend payout ratio is assumed, these are the same growth rates. I also
examined the 5-year projected EPS growth as estimated, calculated, or compiled by
Value Line, Yahoo!, and Zach's for the peer group. Yahoo! and Zach's compile

analysts' estimates and publish them on their websites. Value Line uses a smoothing 1 2 technique to minimize the impacts of potential anomalies in earnings (and thus the starting point for a growth estimate), but the compiled analyst estimates do not, which 3 4 can potentially lead to high or low growth estimates for an individual stock which is not 5 necessarily indicative of the industry as a whole. 6 O. FOR THE PEER GROUP, WHAT GROWTH RATES DID YOU CALCULATE? 7 A. As shown on KgPCo Exhibit 7 (WKC), the growth rates ranged from 5.2% to 7.6%. As with determining the Expected Market Return, I calculated both a market-weighted 8 9 average and the median value for the three estimates. 10 Q. HOW DID YOU CALCULATE THE DIVIDEND YIELD TO USE IN YOUR DCF 11 **ANALYSIS?** To calculate the dividend yields, I divided the expected dividend for each company for 12 A. the next twelve months by a recent 13-week average daily closing price (dates). I have 13 chosen a recent 13-week period as the share price to smooth out fluctuations in the daily 14 15 prices, but still be representative of current investors' expectations. The peer group companies all pay quarterly dividends, so the thirteen week period prices include stock 16 price changes related to the payment of a dividend. Value Line projects the expected 17

dividend for the coming twelve months, corresponding to the period required in the DCF

model. I have used the projected dividends for the next twelve months as reported in the

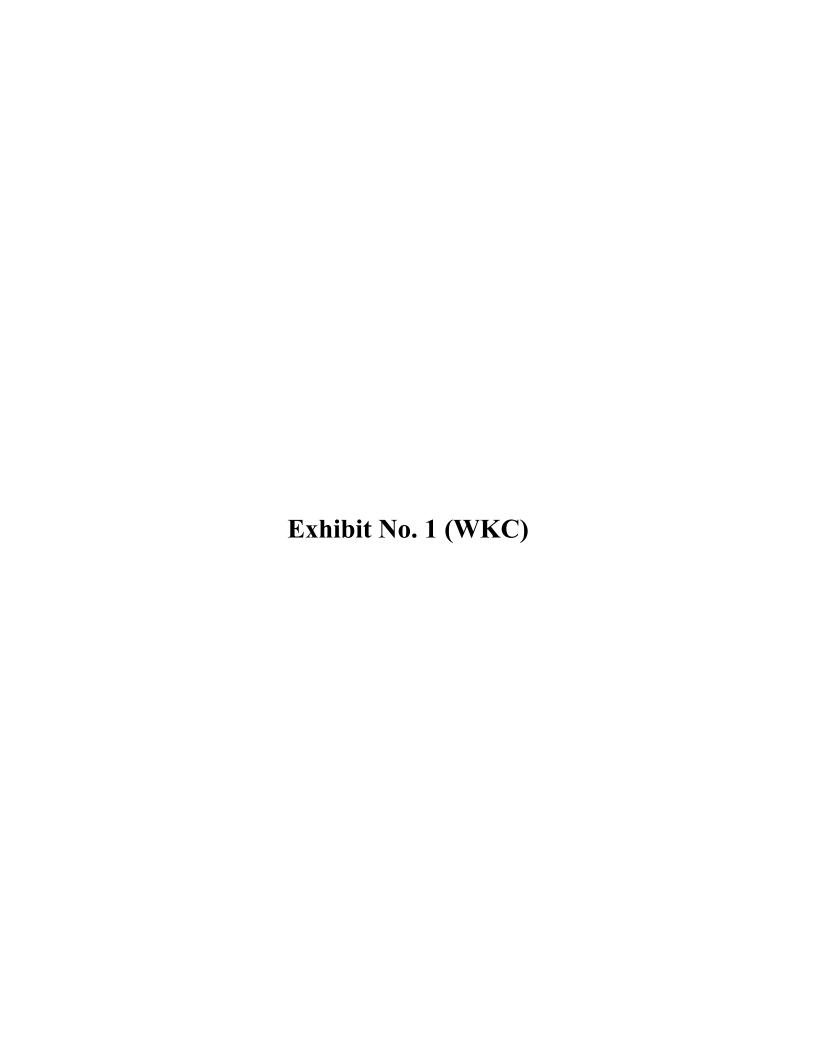
September 24, 2021 Value Line Summary and Index.

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1	Q.	WHAT DIVIDEND YIELD HAVE YOU DETERMINED FOR THE PEER
2		GROUP?
3	A	KgPCo Exhibit 8 (WKC) shows the calculated future dividend yield for the peer group
4		averages. The weighted average is 3.2% and the median is 3.4%. This is what I used in
5		the DCF analysis.
6	Q.	WHAT IS THE COST OF EQUITY USING YOUR ESTIMATE FOR DIVIDEND
7		YIELD AND GROWTH?
8	A.	KgPCo Exhibit 9 (WKC) shows the range of values associated with this analysis. The
9		required rate of return ranges from 9.0% to 10.8%.
10	Q.	DOES IT MATTER TO THE ANALYSIS WHETHER THE GROWTH
11		ESTIMATES ARE ACTUALLY BORNE OUT OR ACCURATE?
12	A.	No. Because the growth estimates represent analysts' expectations for growth, it follows
13		that the stock price accounts for that expectation. The combination of the current stock
14		price and the published growth estimates and the expected dividend results in a market-
15		derived cost of equity.
16	Q.	HOW DID YOU ARRIVE AT YOUR RECOMMENDATION OF 10.2%?
17	A.	I weighted equally the average CAPM result of 10.97% and the average DCF result of
18		9.40%. This is shown on KgPCo Exhibit 10 (WKC).
19	Q.	HOW DOES YOUR RESULT COMPARE WITH THE EARNED RETURNS OF
20		THE PEER GROUP?
21	A.	The CAPM and DCF analyses seek to set an ROE for prospective periods. However, it is
22		perhaps useful to understand what the peer group has earned in the immediate prior
23		periods. KgPCo Exhibit 11 (WKC) shows that the average return for the peer group

- stocks was 9.7%. It is important to keep in mind that actual earned returns may differ
- from regulatory returns to the extent that certain costs may not be recoverable from
- 3 regulated customers.
- 4 Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?
- 5 A. Yes.



EEI Ranking July 2020

	National Average Rate (cents/kWh)	KGP TN Average Rate (cents/kWh)	KGP TN Ranking Across Reporting Utilities (1 highest rate, 160 lowest rate)*
Residential	13.08	9.36	152
Commercial	10.72	9.89	90
Industrial	6.63	6.57	100
Total Retail Average Rates	10.79	8.32	127



-5.7%

	Service Charge	Energy Rate	500 kWh	1000 kWh	1500 kWh
Bright Ridge Electric (Johnson City)	21.00	0.10092	71.46	121.92	172.38
Holston Electric (Rogersville)	19.19	0.10311	70.75	122.30	173.86
City of Bristol Essential Services	10.42	0.08676	55.10	100.98	146.74
City of Greenville	18.24	0.09257	64.53	110.81	157.10
Average	17.21	0.09584	65.46	114.00	162.52
Kingsport -current	12.63	0.09190	58.58	104.53	150.48
Kingsport -proposed	12.63	0.09374	59.50	106.37	153.24

Proposed Rates Above/(Below) Local Average



Kingsport, Tennessee

T.P.U.C. Tariff Number

INDEX

<u>Tariff</u>	Sheet Nu	
	Terms and Conditions of Service	2-1 ,22,23,24
	Fuel and Purchased Power Adjustment Rider	2-1 <u>5</u> 3, 2 14, 2 15, thru 2-1 <u>8</u> 6
	Federal Tax Rate Adjustment Rider	2-24
R.S.	Residential Electric Service	3
R.SE.	Residential Electric Service-Employee	4
R.SS.T.O.U.	Residential Smart Time-of-Use Electric Service	5
R.ST.O.D.	Residential Time-of-Day Electric Service	6
S.G.S.	Small General Service	7
M.G.S.	Medium General Service	8-1 <u>thru</u> , 8-2
G.ST.O.D.	General Service Time-of-Day	9
L.G.S.	Large General Service	10-1 <u>thru</u> ,-10-2
I.P.	Industrial Power	11-1 <u>thru,</u> 11-2
E.H.G.	Electric Heating General	12
C.S.	Church Service	13
P.S.	Public Schools	14
E.O.P.	Emergency Operating Plan	15
O.L.	Outdoor Lighting	16-1 , 16-2, thru 16- <u>3</u>
S.L.	Street Lighting	17-1 thru 17-3
N.M.S.	Net Metering Service Rider	1 <u>8</u> 7-1 <u>thru, 17 2, 17 3, 17 4,</u> 1 <u>8</u> 7-5
R.T.O.D.R	Regional Transmission Organization Demand Response	
S.D.R.	Storm Damage Rider	
TRP & MS	Targeted Reliability Plan & Major Storm Rider	21-1 <u>thru</u> , 21-2
S.B.S.	Standby Service	22-1 , 22-2, 22-3, thru 22-4

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Original Sheet Number 2-1 Page 3 of 75 T.R.A.T.P.U.C. Tariff Number 32 –

TERMS AND CONDITIONS OF SERVICE

DEFINITIONS

Words or phrases in this tariff shall be defined as follows:

"Advanced Metering" A meter (1) capable of remote meter reading and/or (2) capable of storing electric consumption data at specified time intervals compliant with existing tariffs and in conformance with applicable performance specifications.

"Applicant" – Any person, group of persons, including the developer, builder, property owner or other person, association, partnership, firm, corporation or other entity requesting Electric Service from the Company, or who has not been recognized by the Company as a customer.

"Company" – Kingsport Power Company.

"Contribution-in-Aid-of-Construction (CIAC)" – Payment by customer to cover the cost of facilities not covered by the applicable revenue credit. The CIAC includes all state and federal income taxes incurred by the Company that are associated with such payment "

"Customer" – Any person, group of persons, including the developer, builder, property owner or other person, association, partnership, firm, corporation or other entity purchasing Electric Service from the Company.

"Delivery Point" – The point of connection between the distribution facilities of the Company and the electric system of the customer.

"Electric Service" – The supply of electricity by the Company to a retail customer.

"Electricity Supply Service" – The generation of electricity, or when provided together, the generation of electricity and its transmission to the distribution facilities of the Company on behalf of a retail customer.

"Meter Reading" - Any reading obtained from a meter via manual or electronic reading process.

"Month" – The elapsed time between two successive meter readings approximately thirty (30) days apart.

"Non-Standard Meter" – A meter that is not a Standard Meter because it lacks the ability to provide one or more of the following functions: automated or remote Meter Reading, two-way communications, remote disconnection and reconnection capability, or the capability to store electric consumption data at specified time intervals compliant with existing tariffs and in conformance with applicable performance specifications, or as designated by the Company as a non-standard meter.

"Person" – Any individual, corporation, partnership, association, company, business, trust, joint venture, or other private legal entity, and the State of Tennessee or any city, county, town, authority or other political subdivision of the State of Tennessee.

"Standard Meter" or "AMI" -- A meter (1) capable of automated or remote meter reading and (2) capable of two-way communications and (3) capable of storing electric consumption data at specified time intervals compliant with existing tariffs and in conformance with applicable performance specifications, or as designated by the Company as a standard meter.

"Submetered Service" – The measurement of electricity by the owner/operator of a master metered multiple occupancy building for the purpose of determining the actual use of individual occupants.

"TRATPUC" - Tennessee Regulatory Authority Public Utility Commission.

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APPLICATION

The Company reserves the right to require an applicant, before any electricity is delivered, to:

- (1) Establish that the applicant is the owner or bona fide lessee of the premises and to require all owners and bona fide lessees to have the electric service in their names.
- (2) Execute an electric service application. Notwithstanding the application, an applicant, by accepting the electricity, agrees to be bound by the applicable Tariff and these Terms and Conditions as amended from time to time. Failure to make application does not relieve new customers from being liable for all services supplied since the last meter reading, either actual or estimated, under the appropriate Tariff.

A copy of the Tariffs and the Terms and Conditions under which service is to be rendered to the customer will be furnished upon request. The customer shall select the particular Tariff, of those available, upon which the application for

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TERMS AND CONDITIONS OF SERVICE

service shall be based. The Company may assist the customer in making this selection but responsibility for the selection rests exclusively with the customer.

A written agreement may be required from a customer before service will be commenced. A copy of the agreement will be furnished to the customer upon request.

When the customer desires delivery of energy at more than one point, a separate agreement will be required for each separate point of delivery. Service delivered at each point of delivery will be billed separately under the applicable Tariff.

DEPOSITS

Pursuant to the Rules and Regulations of the TRATPUC, Section 1220-4-4-.15, a deposit, or suitable guarantee, as security for the payment of bills, may be required of the customer at any time or from time to time before or after service is commenced. Such deposit shall not be more in amount than the maximum estimated charge for service for two (2) consecutive billing periods or ninety (90) days, whichever is less, or as may reasonably be required by the utility in cases involving service for short periods or special occasions. The Company will pay an interest rate on deposits as approved by the TRATPUC. The Company may retain the deposit as long as it feels it is necessary to insure payment of bills for service.

The Company will not be required to supply service if deposit conditions are not met or if an appropriate deposit is not paid as required.

The Company shall have a reasonable time in which to read and remove the meters and to ascertain that the obligations of the customer have been fully performed before being required to return any deposit. Retention by the Company, prior to final settlement, of any deposit or guarantee, shall not be deemed a payment or partial payment of any bill for service.

METERING AND BILLING

Meters will be read monthly, unless otherwise indicated within an individual tariff, except that readings may be estimated on occasion as necessary.

All electricity sold by the Company shall be on the basis of meter measurement, except for installations such as street lighting, outdoor lighting, traffic signal and other service where the usage is constant and the consumption may readily be computed, consistent with tariff availability, and all charges for electricity used shall be calculated from the meter reading or estimated consumption and the usage at each Delivery Point shall be billed separately.

Whenever it is found that electric service is being used as a result of tampering, the customer will pay to the Company an amount estimated by the Company to be sufficient to cover the electric service used and not previously paid for, as well as an amount equal to any damage done to the company's facilities as a result of such tampering.

When meters are installed by the Company to measure the Electric Service used by the Company's Customers, all charges for Electric Service used, except certain customer and minimum charges, shall be calculated from the readings of such meters. All meters used to determine billing will be owned and operated by the Company.

The Company installs, maintains and operates a variety of meters, including <u>AMIAdvanced Meters</u> and related equipment designed to measure and record Customers' consumption and usage of electric services provided under this Tariff. The Company may from time to time, at its sole and exclusive discretion, install such meters and related equipment, including but not limited to, telemetering equipment and <u>Advanced Meters AMI</u>, it deems reasonable and appropriate to provide electric service to Customers under this Tariff.

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T.R.A.T.P.U.C. Tariff Number 32 –

TERMS AND CONDITIONS OF SERVICE

ADVANCED METERING INFRASTRUCTURE (AMI) METER OPT-OUT PROVISION (RESIDENTIAL ONLY)

Customers served on residential tariffs RS and RS-E may elect to opt-out of the Company's choice of AMI metering equipment as follows:

NON-STANDARD METER INSTALLATION CHARGE

Customers selecting an alternative metering service shall pay the following one-time installation charge per premise:

<u>Meter</u>	Charge (\$)
Digital Non-communicating Meter	61.44
Two-way Communicating Meter	<u>277.01</u>

NON-STANDARD METER MONTHLY SERVICE CHARGE

Customers selecting an alternative metering service shall pay the following monthly charge per meter:

<u>Meter</u>	Charge (\$)
Digital Non-communicating Meter	<u>37.92</u>
Two-way Communicating Meter	<u>7.18</u>

In order for a customer to be eligible to receive a non-standard meter instead of an AMI meter, the customer shall have no documented instances, within the past 24 months, of known unauthorized use, theft, or fraud. Further, the customer will have zero instances of threats of violence toward Company employees or its agents. Service under this provision will be terminated if access to the Company's non-standard meter is denied two (2) times. A customer who has requested non-standard metering service may terminate the non-standard metering at any time and request a standard meter, at which time the monthly charge will no longer be applicable.

The customer may also elect to relocate the current meter to a location acceptable to the Company, with the expense of such relocation to be paid by the customer, as specified in accordance with the provisions set forth herein.

PAYMENTS

Bills will be rendered by the Company to the customer monthly in accordance with the tariff selected applicable to the customer's service with the following exceptions:

EQUAL EXTENDED PAYMENT PLAN (EEP)

Residential customers shall have the option of paying bills under the Company's equal payment plan (Budget Plan), whereby the total service for the succeeding 12-month period is estimated in advance, and bills are rendered monthly on the basis of one twelfth of the 12-month estimate. The Company may at any time during the 12-month period adjust the estimate so made, and the bills rendered in accordance with such estimate, to conform more nearly with the actual use of service being experienced. The normal equal payment period will be 12 months, commencing in any month selected by the Company.

In case the actual service used during any equal payment period exceeds the bills as rendered on the equal payment plan, the amount of such excess shall be paid on or before the due date of the bill covering the last month of the equal payment period in which such excess appears. If the customer discontinues service with the Company under the equal payment plan, any such excess not yet paid shall become payable immediately. In case the actual service used during the equal payment period is less than the amount paid under the equal payment plan during such period, the amount of such overpayment shall, at the option of the Company, either be refunded to the customer or credited on his last bill for the period.

If a customer fails to pay bills as rendered on the equal payment plan, the Company shall have the right to withdraw the plan with respect to such customer and to restore the customer to billing as provided for in the

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KgPCo Exhibit No. 3 Witness: WKC

applicable tariffs, in addition to any other rights which the Company may have under such tariffs in case of arrearage Page 7 of 75 in payment of bills.

AVERAGE MONTHLY PAYMENT PLAN (AMP)

The Average Monthly Payment Plan (AMP) is available to year-round residential customers and Small General Service customers.

The AMP Plan is designed to minimize large seasonal variations in electric service billings by allowing the customer to pay an average amount each month based on the current month's billing, including applicable taxes and surcharges, plus the eleven (11) preceding months, divided by the total billing days associated with those billings to get a per day average. The average daily amount will be multiplied by thirty (30) days to determine the current month's payment under the AMP Plan. At the next billing period, the oldest month's billing history is dropped, the current month's billing is added and the average is recalculated to find a new payment amount. The average is recalculated each month in this manner.

In such cases where sufficient billing history is not available, an AMP account may be established allowing the first month's amount be the average based on the actual billing for the month. The second month's amount due will be the average based on the first and second billing. The average will be recomputed each month using the available actual history throughout the first AMP year.

Actual billing will continue to be based on the applicable rate and meter readings obtained to determine consumption. The difference between actual billings and the averaged billings under the AMP Plan will be carried in a deferred balance that will accumulate both debit and credit differences for the duration of the AMP Plan year – twelve consecutive billing months. At the year of the AMP Plan year (anniversary month), the net accumulated deferred balance is divided by twelve (12) and the result is included in the average payment amount starting with the first billing of the new AMP Plan year and continuing for twelve (12) consecutive months. Settlement occurs only when participation in the plan is terminated. This happens if an account is final billed, if the customer requests

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T.R.A.T.P.U.C. Tariff Number 32-

TERMS AND CONDITIONS OF SERVICE

termination, or may be terminated by the Company if the customer fails to make two or more consecutive monthly payments on an account. The deferred balance (debit or credit) is then applied to the billing now due.

All bills are payable <u>via US Meither by mail</u>, <u>through a variety of telephonic</u>, <u>internet-based</u>, <u>or other electronic means</u>, <u>checkless payment plan</u>, <u>electronic payment plan</u>, <u>through at authorized collection agencies</u>, or by other payment methods acceptable to the Company. Any fees charged by third party vendors for providing payment services are the responsibility of the customer.

All bills from the Company are due in \$US dollars and are payable within the time limits specified in the tariff. Failure to receive bill will not entitle customer to any discount or to the remission of any charge for non-payment within the time specified. In the event of the stoppage of or the failure of any meter to register the full amount of energy consumed, the customer will be billed for such period on an estimated consumption based upon his use of energy in a similar period of like use.

The tariffs of the Company contain a provision to allow a discount if the account of the customer is paid within the time limit specified in the tariff applicable to his service.

RETURNED CHECK CHARGE

In cases where a check is tendered for payment of an account is returned for insufficient funds or other reason, excluding bank error, a \$12.50 service charge will be made.

INSPECTION

It is to the interest of the customer to properly install and maintain the customer's wiring and electrical equipment and the customer shall at all times be responsible for the character and condition thereof. It is the customer's responsibility to assure that all inside wiring, appliances and equipment are grounded and are otherwise in accordance with requirements of the National Electric Code or the requirements of any local inspection authority having jurisdiction. The Company is not required to inspect such wiring and electrical equipment, and in no event shall the Company be responsible therefore or liable for any damages to person or property caused by such wiring or equipment.

Where a customer's premises are located in a municipality or other governmental subdivision where inspection laws or ordinances are in effect, the Company may withhold furnishing service to new installations until it has received evidence that the inspection laws or ordinances have been complied with.

Where a customer's premises are located outside of an area where inspection service is in effect, the Company may require the delivery by the customer to the Company of an agreement duly signed by the owner and tenant of the premises authorizing the connection to the wiring system of the customer and assuming responsibility therefor. No responsibility shall attach to the Company because of any waiver of this requirement.

SERVICE CONNECTIONS

The Company shall not be required to provide electric service until a reasonable time has elapsed after the Company has obtained or received all suitable permits, certificates and easements.

If requested, applicants and customers shall supply the Company with drawings and specifications covering the plot and structures requiring electric service. The Company shall not be obligated to provide electric service until the applicant or customer has properly prepared the site for installation of the Company's facilities.

The Company shall supply electricity at one Delivery Point whose location shall be determined by the Company. The customer's wiring shall, except for those cases listed below, be brought outside the building wall nearest the Company's service wires so as to be readily accessible thereto. When service is from an overhead system, the customer's wiring shall

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extend at least 18 inches beyond the building.

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TERMS AND CONDITIONS OF SERVICE

The Company will not furnish, install or replace service entrance cable. Whenever a customer desires that energy be delivered at a point or in a manner other than that designated by the Company, the customer shall pay a Contribution-in-Aid-

of-Construction (CIAC) reimbursing the Company for the additional costs of providing such service. The customer shall also reimburse the Company for all state and federal income taxes associated with the CIAC at a gross-up rate of 17.5%.

The Company shall provide underground distribution and/or underground services to individual customers, to groups of customers, or to real estate developers in accordance with the Underground Distribution and Service Plan on file with the Tennessee Public Utility Commission. Copies of the Underground Distribution and Service Plan are available upon request.

CONTRIBUTIONS IN AID OF CONSTRUCTION AND CUSTOMER ADVANCES

The Company will require from any customer and/or developer a Contribution in Aid of Construction or Customer Advance for installation of underground service in lieu of standard overhead service, construction of additional facilities to serve only the subject customer or facilities over and above the standard necessary to provide reliable electric power service. This Contribution in Aid of Construction or Customer Advance will be calculated according to the most recent facility costs available to the Company. The customer shall also reimburse the Company for all state and federal income taxes associated with the CIAC at a gross-up rate of 17.5%.

RELOCATION OF COMPANY'S FACILITIES AT CUSTOMER'S REQUEST

Whenever, at the customer's request, Company's facilities located on the customer's premises are relocated to suit the convenience of the customer, the customer shall reimburse the Company for the entire cost incurred in making such relocation. Such relocation shall include all state and federal income taxes associated with the relocation cost at a gross-up rate of 17.5%.

COMPANY'S LIABILITY

The Company will use reasonable diligence in furnishing a regular and uninterrupted supply of energy, but the Company does not guarantee uninterrupted service. The Company shall not be liable for damages for injury to person or property in the event such supply is interrupted or fails by reason of an act of God, the public enemy, accidents, strikes or labor disputes, orders or acts of civil or military authority, breakdowns or injury to the machinery, transmission lines, distribution lines or other facilities of the Company, extraordinary repairs, or any act of the Company to interrupt service to any customer whenever in the sole judgment of the Company such interruption is indicated in order to prevent or limit any instability or disturbance on the electric system of the Company or any electric system interconnected with the Company or ordinary negligence or breach of contract on the part of the Company, its agents or employees.

Unless otherwise provided in a contract between Company and Customer, the point at which service is delivered by Company to customer, to be known as "delivery point", shall be the point at which the customer's facilities are connected to the Company's facilities. The metering device is the property of the Company; however, the meter base and all internal parts inside the meter base are customer owned, and are the responsibility of the customer to install and maintain. The Company shall not be liable for any loss, injury, or damage resulting from the customer's use of the customer's equipment or use of the energy furnished by the Company beyond the delivery point.

The Company does not guarantee the delivery service against fluctuations or interruptions. The Company will not be liable for any damages, whether direct or consequential, including, without limitations, loss of profits, loss of revenue, or loss of production capacity occasioned by fluctuations or interruptions. The customer shall provide and maintain suitable protective devices on the customer's equipment to prevent any loss, injury or damage that might result from single phasing conditions or any other fluctuation or irregularity in the supply of energy. The Company shall not be liable for any loss, injury or damage resulting from a single phasing condition or any other fluctuation or irregularity in the supply of energy which could have been prevented by the use of such protective devices.

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Original Sheet Number 2-6 Page
T.R.A.T.P.U.C. Tariff Number 32 –

TERMS AND CONDITIONS OF SERVICE

The Company is not responsible for loss or damage caused by the disconnection or reconnection of its facilities. The Company is not responsible for loss or damages caused by the theft or destruction of Company facilities by a third party.

The Company shall provide and maintain the necessary line or service connections, transformers (when same are required by conditions of contract between the parties thereto), meters and other apparatus which may be required for the proper measurement of and protection to its service. All such apparatus shall be and remain the property of the Company.

CUSTOMER'S LIABILITY

In the event of loss or injury to the property of the Company through misuse by, or the negligence of, the customer or the customer's agents and employees, the customer shall be obligated for and shall pay to the Company the full cost of repairing or replacing such property. The customer shall be responsible for the entire cost incurred in relocating a Company pole if the customer jeopardizes the integrity of the pole. In addition, the customer shall reimburse the Company for all state and federal income taxes associated with such relocation.

The customer and the customer's agents and employees shall not tamper with, interfere with or break the seals of any meters used by the Company or any Company-owned equipment installed on the customer's premises, and the customer assumes all liability for the consequences thereof. The customer hereby agrees that no one, except the agents and employees of the Company, shall be allowed to make any internal or external adjustments of any installed meter used by the Company or any other piece of apparatus which belongs to the Company.

The Company shall have the right at all reasonable hours to enter the premises of the customer for the purpose of installing, reading, removing, testing, replacing or otherwise disposing of meters used by the Company and all Company-owned apparatus and property. The Company shall have the right to discontinue electric service if such access at any time is not provided. The Company shall also have the right to remove any or all of the Company's property in the event of termination of the customer's service for any reason.

DOMESTIC SERVICE

Individual residences shall be served individually under the appropriate residential tariff. The customer may not take service for two or more separate residences through a single point of delivery under any residential schedules, even if the customer owns all of such residences. In the case of multi-unit residential dwellings such as apartment houses, condominiums, townhouses, etc., the owner shall have the choice of providing separate wiring for each unit so that the Company may supply each such unit separately under residential schedules, or of purchasing the entire service through a single meter under the appropriate general service tariff. The owner may provide submetered service to the individual units under rules for master metering electricity as specified in the Rules and Regulations of the TRATPUC, Section 1220-4-4-.07 (2). Hospitals, nursing homes, hotels, motels and dormitories are not considered multi-unit residential dwellings.

Single phase motors of 10 H.P., or less, may be served under the appropriate residential tariff. Larger motors may be served when, in the Company's sole judgment, the existing service facilities of the Company are adequate.

Detached buildings actually appurtenant to the customer's residence, such as a garage, stable, or barn, may be served by an extension of the customer's residential wiring through the residential meter provided no business activities are transacted in the detached buildings.

CHANGE OF ADDRESS BY CUSTOMER

It is the responsibility of an existing customer to notify the Company when service is to be discontinued, and to provide a mailing address for the final bill.

When the Company receives notice from an existing customer that the service is to be discontinued, or from a prospective customer that an existing service is to be transferred into the prospective customer's name, the Company will

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Original Sheet Number 2-7 T.R.A.T.P.U.C. Tariff Number 32

TERMS AND CONDITIONS OF SERVICE

determine the meter reading for the final bill to the existing customer. The existing customer will be responsible for all service supplied to the premises until such meter reading and discontinuance or transfer is made. Transfer of service to a qualified prospective customer will not be delayed or denied because of nonpayment of the final bill by the former customer, unless the former customer continues to be a consumer of electric service at the premise.

EXTENSION OF SERVICE

The electrical facilities of the Company will be extended or be expanded to supply electric service when the revenue is sufficient to justify the cost of making such additions, or in lieu of sufficient revenue the Company may require a long term contract and/or contribution, monthly minimum charge, definite and written guarantee, from a customer or group of customers in addition to any minimum payment required by the tariff as may be necessary. This requirement may also be applied to cover the payment by the customer of the cost of tapping existing transmission or distribution lines for electric service or for reservation of electrical capacity when such service or reservation will not otherwise provide sufficient revenue to justify the cost of tapping said lines.

LOCATION AND MAINTENANCE OF COMPANY'S EQUIPMENT

In order to provide service to the customer, the Company shall have the right to construct its poles, lines and circuits on the customer's property, and to place its transformers and other apparatus on the property or within the buildings of the customer, at a point or points convenient for such purpose.

The customer shall provide suitable space for the installation of necessary measuring instruments at an outside location, where practicable, designated by the Company so that such instruments will be protected from injury by the elements or through the negligence or deliberate acts of the customer, its agents and employees. Such space for measuring instruments should be unobstructed, readily accessible and, safe and convenient for reading, testing and servicing by the Company.

USE OF ENERGY BY CUSTOMER

The tariffs for electric energy given herein are classified by the character of use of such energy and are not available for service except as provided herein.

When more than one tariff is available for the service requested, the customer shall designate the tariff on which the request or contract shall be based. The Company will assist the customer in the selection of the tariff best adapted to the customer's service requirements, provided, however, that the Company does not assume responsibility for the selection or that the customer will at all times be served under the most favorable tariff.

The customer may change the initial tariff selection to another applicable tariff at any time by either written notice to Company and/or by executing a new contract for the tariff selected, provided that the application of such subsequent selection shall continue for 12 months before any other selection may be made. In no case will the Company refund any monetary difference between the tariff under which service was billed in prior periods and the newly selected tariff.

With particular reference to power customers it shall be understood that upon the expiration of a contract the customer may elect to renew the contract upon the same or another tariff published by the Company available in the district in which the customer resides or operates and applicable to the customer's requirements, except that in no case shall the Company be required to maintain transmission, switching or transformation equipment (either for voltage or form of current change) different from or in addition to that generally furnished to other customers receiving electrical supply under the terms of the tariff elected by the customer.

A customer may not change from one tariff to another during the term of contract except with the consent of the Company.

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TERMS AND CONDITIONS OF SERVICE

The service connections, transformers, meters and appliances supplied by the Company for each customer have a definite capacity and no additions to the equipment, or load connected thereto, will be allowed except by consent of the Company. The customer shall install only motors, apparatus or appliances which are suitable for operation with the character of the service supplied by the Company, and which shall not be detrimental to same, and the electric power must not be used in such a manner as to cause unprovided for voltage fluctuations or disturbances in the Company's transmission or distribution system. The Company shall be the sole judge as to the suitability of apparatus or appliances, and also as to whether the operation of such apparatus or appliances is or will be detrimental to its general service. No attachment of any kind whatsoever may be made to the Company's lines, poles, cross arms, structures or other facilities without the express written consent of the Company.

The customer shall make no attachment of any kind whatsoever to the Company's lines, poles, crossarms, structures or other facilities without the express written consent of the Company.

All apparatus used by the customer shall be of such type as to secure the highest practicable commercial efficiency, power factor and proper balancing of phases. Motors which are frequently started or motors arranged for automatic control, must be of a type to give maximum starting torque with minimum current flow, and must be of a type, and equipped with controlling devices, approved by the Company. The customer agrees to notify the Company of any increase or decrease in his connected load.

The Company will not supply service to customers who have other sources of energy supply except under tariffs which specifically provide for same. Whenever used in these Terms and Conditions of Service or in any of the Company's tariffs the term "other sources of energy supply" shall mean "other sources of electric energy supply". The customer shall not be permitted to operate his own generating equipment in parallel with the Company's service except with the express written consent of the Company.

Resale of energy will be permitted only by written consent of the Company.

RESIDENTIAL SERVICE

Individual residences shall be served individually with single-phase service under the residential service tariff. Customers may not take service for 2 or more separate residences through a single point of delivery under any tariff even if the customer owns all of such residences. In the case of multi-unit residential dwellings such as apartment houses, condominiums, townhouses, etc., the owner shall have the choice of providing separate wiring for each unit so that the Company may supply each unit separately under residential tariffs, or of purchasing the entire service through a single meter under the appropriate general service tariff without submetering the service to the units.

Detached building or buildings, actually appurtenant to the residence, such as a garage, stable or barn, may be served by an extension of the customer's residence wiring through the residence meter.

TEMPORARY SERVICE

Temporary service is electric service that is required for a limited duration, where capacity is available, to nonpermanent installations such as construction projects, transient uses such as traveling shows, fairs, exhibitions, outdoor or indoor entertainment, seasonal installations, or under other circumstances where the Company has reason to believe that the facilities will not be used for a permanent supply of electricity. Such service is available only upon approval of the Company. In order to qualify for temporary service, the customer must demonstrate, to the Company's satisfaction, that the requested service will, in fact, be temporary in nature.

Temporary service shall be provided through its own separately metered delivery point. The temporary service pole shall be reasonably accessible to the Company's service vehicles without causing damage to the customer's or other's property.

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TERMS AND CONDITIONS OF SERVICE

Temporary service for light and power will be supplied under any published tariff applicable to the class of business of the customer, when the Company has available unsold capacity of lines, transformers, and generating equipment. The customer will pay a temporary service charge in advance equal to the estimated cost to the Company for providing the temporary service. The service charge, as set forth in the applicable tariff shall be, in no case, less than one full monthly amount. The Company reserves the right to require a written contract for temporary service, at its option.

CHARACTERISTICS OF SERVICE SUPPLIED

The following definitions apply to terms used below:

- "Nominal Voltage" is the reference level of service voltage.
- "Maximum Voltage" is the greatest 5-minute mean or average voltage.
- "Minimum Voltage" is the least 5-minute mean or average voltage.

The Company shall endeavor to supply voltages within the following limits:

- 1. For electricity supplied for residential service in urban areas, the variation from nominal voltage to minimum voltage will not be more than 5% of the nominal voltage, and the variation from nominal voltage to maximum voltage will not be more than 5% of the nominal voltage.
- 2. For electricity supplied for residential service in all other areas, the variation from nominal voltage to minimum voltage will not be more than 7.5% of nominal voltage, and the variation from nominal voltage to maximum voltage will not be more than 7.5% of the nominal voltage.
- 3. For electricity supplied for other services, the variation from nominal voltage to minimum voltage will not exceed 7.5% of the nominal voltage, and the variation from nominal voltage to maximum voltage will not exceed 7.5% of the nominal voltage.

The Company shall not be responsible for variations in voltage in excess of those specified above arising from causes beyond the control of the Company.

VOLTAGES

The standard nominal distribution service voltages within the service area of the Company are:

<u>Secondary</u>		<u>Primary</u>
Single Phase	Three Phase	Three Phase
120/240 volts	120/208 volts	12,470/7,200 volts
120/208 volts	240 volts	34.5/19.9 KV
	277/480 volts	

The standard subtransmission and transmission service voltages within the service area of the Company are:

Subtransmission	<u>Transmission</u>
Single or Three Phase	Three Phase
34.5 KV	138 KV
69 KV	

METER ACCURACY AND TESTS

The Company's meter performance levels, testing methods, and test schedules are in conformance with the standards recommended by the American National Standard Code for Electricity Metering, (ANSI C12.1), as revised from time to time.

The performance of a Watthour meter is considered to be acceptable when the meter disk <u>emulator</u> does not creep and when the percent registration is not more than 102%, nor less than 98%, based upon the simple average of light load and heavy load.

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KgPCo Exhibit No. 3 Witness: WKC Page 15 of 75

The performance of a demand meter or register shall be acceptable when the error in registration does not exceed 4% in terms of full scale value when tested at any point between 25% and 100% of full scale value.

Whenever Watthour meters are being tested for accuracy and found to be registering outside 1% on either light or heavy load or outside 2% on lag, the percentage registration of the meter shall be adjusted to within these limits of error or the meter shall be discarded.

Whenever demand meters or registers are being tested for accuracy and found to be registering outside $\pm 4\%$ of full scale value, the demand meter or register shall be adjusted to within $\pm 2\%$ of full scale value or the meter shall be discarded.

The Company shall, without charge, make a test of the accuracy of any Company-owned electric meter upon request, provided the customer does not request such tests more frequently than once every twelve months. If tests of Company-owned meters are requested by the customer to be made more frequently than once every twelve months, then the customer shall pay the Company a deposit of \$15 for a single phase meter or \$30 for a polyphase meter for each test. The deposit shall be refunded only if the percentage registration of the meter is less than 98% or greater than 102%.

Whenever a meter is found upon periodic, request or complaint test to have an average error of registration of more than 2% (fast or slow), the Company shall recalculate the monthly bills as referenced in the Rules and Regulations of the TRATPUC, Section 1220-4-4-18.

The Company is under no obligation, legal or regulatory, to replace any properly functioning meter in service.

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TERMS AND CONDITIONS OF SERVICE

DENIAL OR DISCONTINUANCE OF SERVICE

- (1) Reasons for Termination of Service or Denial of Service. Service may be refused or discontinued for any of the reasons listed below:
 - (a) Without notice in the event of a condition determined by the utility to be hazardous.
 - (b) Without notice in the event of customer use of equipment in such a manner as to adversely affect the utility's equipment or the utility's service to others.
 - (c) Without notice if there is evidence of tampering with, including and not limited to removal or obstruction of with the equipment, including and not limited to removal or obstruction of metering equipment, furnished and owned by the utility.
 - (d) Without notice if there is evidence of unauthorized use.
 - (e) For violation of and/or non-compliance with the utility's rules on file with and approved by the <u>AuthorityCommission</u>.
 - (f) For failure of the customer to fulfill his contractual obligations for service and/or facilities subject to regulations by the <u>AuthorityCommission</u>.
 - (g) For failure of the customer to permit the utility reasonable access to its equipment.
 - (h) For non-payment of delinquent account.
 - (i) For failure of the customer to provide the utility with a deposit.

Unless otherwise stated, the utility shall comply with the notice requirements set forth in paragraph (2) below before service is discontinued. However, no service shall be discontinued on the day or a date preceding a day or days on which the services of the utility are not available to the general public for the purpose of reconnecting the discontinued service, except as provided in (a), (b), (c) and (d) above. For purposes of this section, the Company recognizes the following holidays: New Year's Day, Good Friday, Memorial Day, July 4th, Labor Day, Thanksgiving Day, the Friday following Thanksgiving Day, Christmas Eve and Christmas Day.

- (2) Notice of Termination of Service. Electric service to any electric customer may not be terminated without reasonable opportunity to dispute the reasons for such termination.
 - (a) Content of the notice, which may be included in the customer's bill, shall be clearly legible and contain the following information:
 - 1. The name and address of the customer and the address of the service, if different.
 - 2. A clear and concise statement of the reason for the proposed termination of service.
 - 3. The date on which service will be terminated unless the customer takes appropriate action. The date of the proposed termination by the utility shall be at least seven (7) days after the utility sends the notice by first class mail. The mailing of the notice of termination, as set forth above, shall constitute reasonable prior notice within the meaning of this rule.
 - 4. Information concerning the reconnection fee.
 - 5. The telephone number and address of the utility where the customer may make inquiry, enter into a service continuation agreement, or file a complaint.
 - The notice shall also contain the name and address of the <u>AuthorityCommission</u> and a statement to the effect that the <u>AuthorityCommission</u> is the regulatory authority for this service.
 - 7. In cases where the termination is based on the failure to pay, the notice shall state if the bill is the actual or estimated, amount owed, and the time period over which the amount was incurred.
 - (b) Notwithstanding any other provisions of these rules, a utility shall postpone the physical termination of utility service to a residential customer for a period of thirty (30) days in the event a physician, public health officer, or social service official certifies in writing that discontinuation of the service will aggravate an existing medical emergency of the customer or other permanent resident of the premises where service is rendered. During the thirty (30) day extension the customer or other permanent resident of the premises where service is rendered shall be referred to

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KgPCo Exhibit No. 3

Witness: WKC Page 17 of 75

social service agencies for investigation, confirmation of need and guarantee of payment.

Issued: September 1, 2016 2022September 1, 2016

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TERMS AND CONDITIONS OF SERVICE

The local utility shall supply customers with names of agencies providing assistance.

(c) All customers shall be provided with the option of a Third Party Notification service and shall be notified annually by the utility of its availability. The Third Party Notification will provide any customer with the opportunity to designate a third party who will receive a duplicate of any termination notice by first class mail.

RECONNECTION CHARGES

- (1) In cases where the Company had discontinued service as herein provided for, the customer shall pay the Company a reconnection charge of \$50.00, as described below, prior to the Company's reconnection of the service. For purposes of this section, the Company recognizes the following holidays: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day, the Friday immediately following Thanksgiving Day, Christmas Eve and Christmas Day.
 - (a) When payment is made during normal working hours (8:00 a.m. to 6:00 p.m., Monday through Friday, excluding holidays), service will be reconnected the same day to residential or small general service customers for a reconnect fee of \$75.00 for a customer with a meter incapable of remote reconnection meter, and \$20.00 for a customer with a meter capable of remote reconnection through the Customer Solutions Center.
 - (b) For payments made after 7:00 p.m. Monday through Friday or during weekends or holidays, service to residential or small general service customers will be reconnected the next regular business day.

The reconnection charge for all customers, where service has been disconnected for fraudulent use of electricity, will be the actual cost of the reconnection.

- (2) When the Company requires past-due balances to be paid prior to reconnection, the Company may further require such payments to be made by cash, certified check, cashier's check or money order at a Company designated payment location when, during the previous twelve months, either of the events below have occurred:
 - (a) The customer's electric service has been disconnected due to non-payment of any bill for electric service.
 - (b) The customer has attempted to make payment by a check upon which the Company was initially unable to collect.
- (3) In addition, the Company may, at its option, require a deposit from the customer prior to reconnecting the service.
- (4) Where service has been discontinued at the request of the customer, and where the same customer requests that the service be reconnected within a period of 8 months from the date that service was discontinued, the customer will be required to pay (1) the avoided monthly basic service charges associated with the rate schedule on which the customer was previously receiving service, plus (2) the reconnection fee in accordance with the above stated reconnection charges.

CUSTOMER RIGHTS AND REMEDIES

- 1. <u>Dispute Resolution</u>. Customers have the right to dispute the reasons for service refusal or termination. The Company has employees available to answer questions, to resolve complaints, to negotiate partial payment plans and to furnish information on its Equal Payment Plan in which the customer can elect to average electric bills so they can be the same each month of the year, provided any outstanding balance is paid.
- Initiation Date. If a payment plan is agreed upon, service will not be terminated as long as the customer
 meets the requirements of the plan. If no payment plan can be mutually agreed upon, the customer may
 contact the Tennessee Regulatory AuthorityTennessee Public Utility Commission. To use the dispute

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resolution process, the customer must contact the Company on or before the specified last payment date fo Page 19 of 75 net amount shown on the bill.

3. <u>Financial Assistance</u>. A customer needing financial assistance may qualify for aid under certain federal, state or local programs. If a customer needs assistance in paying an electric service bill, the customer

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Original Sheet Number 2-12 T.R.A.T.P.U.C. Tariff Number 32 –

TERMS AND CONDITIONS OF SERVICE

should contact the Upper East Tennessee Human Development Agency, phone: (423) 246-6180.

- 4. Payment Pending Resolution. A customer who disputes a bill must notify the Company of the portion of the bill that is disputed and the reasons for disputing the bill. The customer does not have to pay that portion of a bill which is under dispute while the dispute process is underway. However, the greater of the undisputed portion of the bill or the customer's average monthly usage amount must be paid by the specified last payment date for net amount, or service will be terminated.
- 5. <u>Medical Emergency</u>. Electric service will be continued for a period of 30 days when a written certificate, signed by a physician, public health officer or social service official is furnished by the customer stating that an existing medical emergency at the residence will be aggravated by termination of service. During the 30-day extension, the customer should contact the Upper East Tennessee Human Development Agency, phone: (423) 246-6180 for assistance in paying electric bills and arranging for continuation of electric service.
- 6. <u>Critical Health Maintenance Appliances</u>. It is the customer's responsibility to notify the Company if the household has an appliance which is critical for maintenance of the health of any of the residents. The Company will provide the necessary form for notification upon request from the customer.
- 7. <u>Third Party Notification</u>. Any customer may designate a third party, either an agency or an individual, to receive a copy of all termination notices. The Company will provide the necessary form for notification upon request from the customer.
- 8. <u>Deferred Payment Plan.</u> Any residential customer about to be disconnected for nonpayment of past due bills for electric service may have service continued if he/she enters into an agreement with the Company that the total amount due be paid in monthly payments until paid in full within the following six (6) month period in addition to their regular electric service bill. The customer shall be provided a copy of the agreement.
- 9. Winter Reconnection Plan. Any residential customer whose service has been disconnected for nonpayment and who has not been reconnected as of November 1 in any year shall have service reconnected if he/she makes a down payment agreeable with both the Company and the customer not to exceed twenty-five percent (25%) of the balance owed at the time of the service termination, and enters into an agreement with the Company that the balance of the amount past due be paid in monthly payments until paid in full within the following six (6) month period in addition to their regular electric service bill. The customer shall be provided a copy of this agreement.

If the Company and the customer cannot agree about the amount of the down payment, the Company shall inform the customer that he/she may appeal the Company's decision to the Tennessee Regulatory AuthorityTennessee Public Utility Commission and provide the customer with the TRATPUC's toll-free telephone number.

This program, to be known as the "Winter Reconnection Plan," will be in effect from November 1 through March 31 of any year.

10. <u>Tenant Notification of Disconnection</u>. At least thirty (30) days prior to the scheduled date of termination of service for nonpayment at commercially operated master metered multi-family projects, the Company will use its best efforts to notify tenants who are not direct customers of the Company. Posting of a notice of termination at the office of the project shall be deemed compliance with this provision.

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Page 21 of 75

T.P.U.C. Tariff Number 32 _

FUEL AND PURCHASED POWER ADJUSTMENT RIDER

Kingsport Power is authorized under the terms of this rider to apply a charge to all customer bills rendered by the Company to recover the total cost of fuel and purchased power from the Company's wholesale power supplier under the Federal Energy Regulatory Commission implemented rate schedules, including, but not limited to, all demand charges, energy charges and fuel charges which are paid by the Company to its wholesale power supplier in connection with the electric service provided to the Company.

1. <u>Updates to Fuel and Purchased Power Expense</u>

Fuel and Purchased Power Adjustment Rider rates shall remain in effect until such time as new Rider rates are approved by the Tennessee Regulatory Authority Tennessee Public Utility Commission. At least annually, the Company will file information regarding actual fuel and purchased power expenses and revenues collected under this Rider as well as any proposed adjustment to the Rider rates. The Fuel and Purchased Power Adjustment Rider rates will be designed to collect the approved level of fuel and purchased power expense including any prior period over/under recovery balance and any refunds from the Company's wholesale power supplier. Prior period over/under recovery balances result from differences between the Company's actual total costs from its wholesale supplier and actual billing under the Rider.

2. Determination of Adjustments to Surcharges by Tariff

Adjustments to the level of recovery under the Fuel and Purchased Power Adjustment Rider shall be applied proportionally to all Fuel and Purchased Power Adjustment Rider rate components for all tariffs and special contracts.

3. <u>Notification of Change in Charge by the Company</u>

The Company will provide no less than a 30-day notice of the proposed effective date in any change in the purchased power charge to its customers. The Company will also provide the calculations and other information supporting the proposed purchased power charges to the Staff of the Tennessee Public Utility Commission 30 days prior to the effective date of such charge.

4. Charge

Pursuant to the provisions of this Rider, a Fuel and Purchased Power Adjustment Rider charge will be applied to each kilowatt-hour, kilowatt or lamp as billed under the Company's filed tariffs.

The Fuel and Purchased Power Adjustment Rider charge applicable to each tariff is set below:

<u>Tariff</u>	Energy Rate	Demand Rate	Lamp Rate
	(¢) / kWh	(\$) / KW	(\$) / Lamp
Residential			
All kWh	8.332		
Storage Water Heating	6.394		
Residential Employee			
All kWh	8.332		
Storage Water Heating	6.394		
Residential Smart Time-of-Use			
Critical On-peak kWh	<u>17.500</u>		
On-peak kWh	<u>9.895</u>		
Off-peak kWh	6.394		

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T.P.U.C. Tariff Number 32 -

FUEL AND PURCHASED POWER ADJUSTMENT RIDER

<u>Tariff</u>	Energy Rate	Demand Rate	Lamp Rate
	(¢) / kWh	(\$) / KW	(\$) / Lamp
Residential Time-of-Day			
On-peak kWh	9.539		
Off-peak kWh	6.394		
Small General Service (SGS)			
First 600 kWh	6.750		
Over 600 kWh	6.750		
Medium General Service (MGS) Secondary			
First 200 kWh per kW	7.512		
Over 200 kWh per kW	7.245		
Over 200 kwii per kw	7.243		
General Service Time-of-Day (GS-TOD)			
On-peak kWh	8.042		
Off-peak kWh	6.236		
-			
Medium General Service (MGS) Primary			
First 200 kWh per kW	7.513		
Over 200 kWh per kW	6.804		
Longo Conoral Somios (LCS) Secondomi			
<u>Large General Service (LGS) Secondary</u> Demand - kVA		\$4.98	
All kWh	5.212	\$4.90	
All KWII	3.212		
Large General Service (LGS) Primary			
Demand - kVA		\$4.98	
All kWh	4.637		
LGS Subtransmission/Transmission			
Demand - kVA		\$ 4.88	
All kWh	4.550		
Industrial Dawar (ID) Casandawa			
Industrial Power (IP) Secondary Demand - On-Peak kW		\$10.95	
All kWh	4.310	\$10.93	
741 KWII	7.310		
Industrial Power (IP) Primary			
Demand - On-Peak kW		\$ 10.63	
All kWh	4.174		
Industrial Power (IP) Subtransmission/			
Transmission Demand - On-Peak kW		\$11.51	
All kWh	4.108		

Issued: October 28, 2020 2022 November 1, 2020

By: Christian T. Beam, President

Effective: <u>July 1,</u>

Page 23 of 75

T.P.U.C. Tariff Number 32

FUEL AND PURCHASED POWER ADJUSTMENT RIDER

<u>Tariff</u>	Energy Rate	Demand Rate	Lamp Rate
	(¢) / kWh	(\$) / KW	(\$) / Lamp
Church Service			
All kWh	7.672		
Dublic Schools (DS)			
Public Schools (PS) Block 1 kWh Standard	8.417		
Block 2 kWh Electric Heating	8.417		
Block 2 k wil Electric Heating	0.417		
Electric Heating General (EHG)			
All kWh	7.498		
O (los Pales (OI)			
Outdoor Lighting (OL)			
Overhead Lighting Service			
High Pressure Sodium			\$1.30
100 watts, 9,500 Lumens (094)			\$2.91
200 watts, 22,000 Lumens (097)			φ2.91
Flood Lighting Service			
High Pressure Sodium - Floodlight			\$1.30
100 watts, 9,500 Lumens (115)			\$2.91
200 watts, 22,000 Lumens (107)			\$5.75
400 watts, 50,000 Lumens (109)			\$3.73
High Pressure Sodium - Shoebox			\$5.75
400 watts, 50,000 Lumens (120)			\$3.73
Metal Halide - Floodlight			\$3.46
250 watts, 17,000 Lumens (110)			\$5.47
400 watts, 28,800 Lumens (116) Mercury Vapor			Φ3.47
175 watts, 7,000 Lumens (093)			\$2.49
400 watts, 20,000 Lumens (095)			\$5.47
Post Top Lighting Service			ΨΟ.ΤΙ
High Pressure Sodium - PT			
100 watts, 9,500 Lumens (111)			\$1.30
70 watts, 6,300 Lumens (121)			\$0.98
150 watts, 16,000 Lumens (122)			\$2.02
250 watts, 27,500 Lumens (103)			\$3.56
400 watts, 50,000 Lumens (104))			\$5.75
Flood Lighting Service – PT			
High Pressure Sodium – Floodlight			¢2.01
200 watts, 22,000 Lumens (123)			\$2.91
400 watts, 50,000 Lumens (124)			\$5.75
Metal Halide - PT 400 watts, 36,000 Lumens (125)			\$5.47
Metal Halide - Floodlight – PT			φJ. 4 /
400 watts, 36,000 Lumens (126)			\$5.47
Mercury Vapor – PT			ψυτ/
175 watts, 7,000 Lumens (099)			\$2.49

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Kingsport, Tennessee

Outdoor Lighting (OL) – cont'd	
LED Overhead Lighting Service	
50 watts, 5,000 Lumens OH (163)	\$0.56
100 watts, 9,800 Lumens OH (152)	\$1.11
200 watts, 23,000 Lumens OH (165)	\$2.22
150 watts, 20,400 Lumens Flood OH (167)	\$1.67
300 watts, 38,700 Lumens Flood OH (172)	\$3.35
LED Underground Lighting Service	
50 watts, 5,000 Lumens UG (164)	\$0.56
100 watts, 9,800 Lumens UG (153)	\$1.11
115 watts, 15,700 Lumens Shoebox UG (169)	\$1.28
200 watts, 23,000 Lumens UG (166)	\$2.22
40 watts, 4,300 Lumens Postop UG (171)	\$0.44
65 watts, 6,300 Lumens Postop UG (158)	\$0.72
150 watts, 20,400 Lumens Flood UG (168)	\$1.67
300 watts, 38,700 Lumens Flood UG (173)	\$3.35
· · ·	
Street Lighting (SL) tariff code (523)	
High Pressure Sodium	
100 watts, 9,500 Lumens	<u>\$1.36</u>
150 watts, 16,000 Lumens	<u>\$1.98</u>
200 watts, 22,000 Lumens	<u>\$2.85</u>
250 watts, 28,000 Lumens	<u>\$3.48</u>
400 watts, 50,000 Lumens	<u>\$5.63</u>
1000 watts, 140,000 Lumens	<u>\$12.79</u>
Post Top	
100 watts, 9,500 Lumens	<u>\$1.36</u>
150 watts, 16,000 Lumens	<u>\$1.98</u>
<u>250 watts, 28,000 Lumens</u>	<u>\$3.48</u>
200 watts, 22,000 Lumens - Energy/Maintenance	<u>\$2.85</u>
1000 watts, 140,000 Lumens - Energy/Maintenance	<u>\$12.79</u>
Mercury Vapor	
<u>175 watts, 7,000 Lumens</u>	\$2.43
_400 watts, 20,000 Lumens	\$5.34
LED Lighting Service	* • • • • • • • • • • • • • • • • • • •
50 watts, 5,000 Lumens OH/UG	<u>\$0.56</u>
100 watts, 9,800 Lumens OH/UG	\$1.11
200 watts, 23,000 Lumens OH/UG	\$2.22
115 watts, 15,700 Lumens Shoebox UG	\$1.28
40 watts, 4,300 Lumens Postop UG	<u>\$0.44</u>
65 watts, 6,300 Lumens Postop UG	\$0.72
60 watts, 8,900 Lumens Decorative Postop UG	\$0.67
90 watts, 7,800 Lumens Decorative Postop UG	<u>\$1.00</u>

Issued: October 28, 2020 2022 November 1, 2020 By: Christian T. Beam, President Effective: July 1,

T.P.U.C. Tariff Number 32

FUEL AND PURCHASED POWER ADJUSTMENT RIDER

<u>Tariff</u>	Energy Rate	Demand Rate	Lamp Rate
	(¢) / kWh	(\$) / KW	(\$) / Lamp
Backup Service			
Service Reliability Level A			
Secondary		\$ 0.47	
Primary		\$ 0.46	
Sub/Transmission		\$ 0.44	
Service Reliability Level B			
Secondary		\$ 0.93	
Primary		\$ 0.91	
Sub/Transmission		\$ 0.89	
Service Reliability Level C			
Secondary		\$ 1.42	
Primary		\$ 1.39	
Sub/Transmission		\$ 1.35	
Service Reliability Level D			
Secondary		\$ 1.88	
Primary		\$ 1.83	
Sub/Transmission		\$ 1.80	
Service Reliability Level E			
Secondary		\$ 2.36	
Primary		\$ 2.30	
Sub/Transmission		\$ 2.25	
Service Reliability Level F			
Secondary		\$ 2.82	
Primary		\$ 2.74	
Sub/Transmission		\$ 2.69	
Maintenance Service			
Secondary	4.537		
Primary	4.397		
Sub/Transmission	4.326		

Issued: October 28, 2020

2022 November 1, 2020

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Pursuant to an Order in Docket Number 21-00107

Effective:

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Second Revised Original Sheet

T.P.U.C. Tariff Number 32

FEDERAL TAX RATE ADJUSTMENT RIDER

Kingsport Power is authorized under the terms of this rider to apply a credit or charge to all customer bills rendered by the Company to reflect the impacts of changes to the Federal Corporate Income Tax Rate not included in base rate or other tariff schedules.

1. <u>Applicability</u>

Credits or charges resulting from changes in the Federal Income Tax Rate not otherwise incorporated in rate schedules in this tariff shall be applied to all Distribution function base rates in the form of a percentage credit or charge to those rates. The credit or charge will apply to the Service, Energy, Demand, and Lamp charge components of the distribution portion of the schedules. The credit or charge is not applicable to Rider schedules in this tariff.

2. <u>Determination of Credit or Charge Percentage</u>

The aggregate credit or charge amounts shall be determined by the Tennessee Public Utility Commission. The percentage credit or charge will remain in place until modified or discontinued by the Tennessee Public Utility Commission.

3. <u>Notification of Change in Charge by the Company</u>

The Company will provide no less than a 30-day notice of the proposed effective date in any change in the federal tax rate adjustment to its customers. The Company will also provide the calculations and other information supporting the proposed Federal Tax Rate Adjustment Rider to the Staff of the Tennessee Public Utility Commission 30 days prior to the effective date of such charge.

4. <u>Credit or Charge</u>

Pursuant to the provisions of this Rider, a Federal Tax Rate Adjustment Rider credit or charge will be applied to each kilowatt-hour, kilowatt or lamp rate as billed under the Company's filed tariff non-rider schedules.

The Federal Tax Rate Adjustment Rider percentage credit or charge applicable to each schedule after July 1, 2022 for the period January 01, 2021 to December 31, 2021, is a credit or reduction to rates of 0.00005.3953%.

Issued: October 1, 2020

By: Christian T. Beam, President

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Pursuant to an Order in Docket Number 21-0010718-

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KINGSPORT POWER COMPANY d/b/a AEP Appalachian Power

Original Sheet Number 3 T.R.A.T.P.U.C. Tariff Number

Kingsport, Tennessee

TARIFF R. S. (Residential Electric Service)

AVAILABILITY OF SERVICE

Available for residential electric service through one meter to individual residential customers including rural residential customers engaged principally in agricultural pursuits.

MONTHLY RATE (Tariff Code 015)

Service Charge	\$ <u>17.47</u> 12.63 per customer	I
Energy Charge	0. <u>943325</u> cents per KWH	I

MINIMUM CHARGE

This tariff is subject to a minimum monthly charge equal to the service charge.

FUEL AND PURCHASED POWER ADJUSTMENT RIDERS

Monthly charges computed under this tariff shall be adjusted in accordance with the applicable Commission-approved riders as contained herein.

All bills for service according to the rates set forth herein will include charges under the Fuel and Purchased Power Adjustment Rider.

PROMPT PAYMENT DISCOUNT

A discount of 1.5 percent will be allowed if account is paid in full within 15 days of date of bill.

LOAD MANAGEMENT WATER HEATING PROVISION (Tariff Code 011)

For residential customers who install a Company-approved load management water heating system which consumes electrical energy primarily during off-peak hours specified by the Company and stores hot water for use during on-peak hours, of minimum capacity of 80 gallons, the last 250 KWH of use in any month shall be billed at 0.618000 cents per KWH.

This provision, however, shall in no event apply to the first 200 KWH used in any month, which shall be billed in accordance with the MONTHLY RATE as set forth above.

For the purpose of this provision, the on-peak billing period is defined as 6:00 a.m. to 9:00 p.m. local time for all weekdays, Monday through Friday. The off-peak billing period is defined as 9:00 p.m. to 6:00 a.m. for all weekdays, all hours of the day on Saturdays and Sundays, and the legal holidays of New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day.

The Company reserves the right to inspect at all reasonable times the load management water heating system and devices which qualify the residence for service under the load management water heating provision, and to ascertain by any reasonable means that the time-differentiated load characteristics of such devices meet the Company's specifications. If the Company finds that in its sole judgment the availability conditions of this provision are being violated, it may discontinue billing the customer under this provision and commence billing under the standard monthly rate.

This provision is subject to the service charge as stated in the above monthly rate.

TERM OF CONTRACT

A written contract may, at the Company's option, be required to fulfill the provisions of the Terms and Conditions of Service.

SPECIAL TERMS AND CONDITIONS

This tariff is subject to the Company's Terms and Conditions of Service.

This tariff is available for single-phase residential service. Where the residential customer requests three-phase service, this tariff will apply if the residential customer pays the Company the difference between constructing single-phase service and three-phase service. If the Company determines the electricity supplied is primarily Where motors or heating equipment are used for commercial or industrial purposes, the applicable general service tariff will apply to such service.

Issued: September 1, 2016 2022September 1, 2016

By: Charles Patton Christian T. Beam, President

Pursuant to an Order in Docket Number 16-

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Original Sheet Number 4 T.R.A.T.P.U.C. Tariff Number

Kingsport, Tennessee

TARIFF R. S.-E. (Residential Electric Service - Employee)

AVAILABILITY OF SERVICE

Available for residential electric service through one meter to current regular and retired employees of the Company. This tariff is not available to employees hired after December 31, 2016.

MONTHLY RATE (Tariff Code 018)

Ι Energy Charge 0.618000 cents per KWH

MINIMUM CHARGE

This tariff is subject to a minimum monthly charge equal to the service charge.

FUEL AND PURCHASED POWER ADJUSTMENT RIDERS

Monthly charges computed under this tariff shall be adjusted in accordance with the applicable Commission-approved riders as contained herein.

All bills for service according to the rates set forth herein will include charges under the Fuel and Purchased Power Adjustment Rider.

PROMPT PAYMENT DISCOUNT

A discount of 1.5 percent will be allowed if account is paid in full within 15 days of date of bill.

LOAD MANAGEMENT WATER HEATING PROVISION (Tariff Code 051)

For residential customers who install a Company-approved load management water heating system which consumes electrical energy primarily during off-peak hours specified by the Company and stores hot water for use during on-peak hours, of minimum capacity of 80 gallons, the last 250 KWH of use in any month shall be billed at 0.000-618 cents per KWH.

This provision, however, shall in no event apply to the first 200 KWH used in any month, which shall be billed in accordance with the MONTHLY RATE as set forth above.

For the purpose of this provision, the on-peak billing period is defined as 6:00 a.m. to 9:00 p.m. local time for all weekdays, Monday through Friday. The off-peak billing period is defined as 9:00 p.m. to 6:00 a.m. for all weekdays, all hours of the day on Saturdays and Sundays, and the legal holidays of New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day.

The Company reserves the right to inspect at all reasonable times the storage water heating system and devices which qualify the residence for service under the storage water heating provision, and to ascertain by any reasonable means that the time-differentiated load characteristics of such devices meet the Company's specifications. If the Company finds that in its sole judgment the availability conditions of this provision are being violated, it may discontinue billing the customer under this provision and commence billing under the standard

This provision is subject to the service charge as stated in the above monthly rate.

TERM OF CONTRACT

A written contract may, at the Company's option, be required to fulfill the provisions of the Terms and Conditions of Service.

SPECIAL TERMS AND CONDITIONS

This tariff is subject to the Company's Terms and Conditions of Service.

This tariff is available for single-phase residential service. Where the residential customer requests three-phase service, this tariff will apply if the residential customer pays the Company the difference between constructing single-phase service and three-phase service. If the Company determines the electricity supplied is primarily Where motors or heating equipment are used for commercial or industrial purposes, the applicable general service tariff will apply to such service.

The Tariff R. S. gross amount will apply if payment of account in full is not received by the date due.

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Pursuant to an Order in Docket Number 16-

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Original Sheet Number 5
T.R.A.T.P.U.C. Tariff Number

Kingsport, Tennessee

TARIFF R.S.-S.T.O.U. (Residential Smart-Time-of-Use Electric Service)

AVAILABILITY OF SERVICE

Available for electric service to individual residential customers, including rural residential customers engaged principally in agricultural pursuits, who have a standard meter.

MONTHLY RATE (Tariff Code 036)

Service Charge	\$ 17.47 per customer	Р
Energy Charge:		
For all KWH used during the critical peak billing period	0.943 cents per KWH	P
For all KWH used during the on-peak billing period	0.943 cents per KWH	P
For all KWH used during the off-peak billing period	0.943 cents per KWH	р

For the purpose of this tariff, the critical on-peak billing period is defined as 7 a.m. to 10 a.m. December-February and 4:00 p.m. to 7:00 p.m. June-September. The on-peak billing period is defined as 6 a.m. to 9 p.m., local time, for all weekdays, Monday through Friday that are not defined as critical on-peak hours. The off-peak billing period consists of hours not defined as on-peak for all weekdays, all hours of the day on Saturdays and Sundays, and the legally observed holidays of New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

MINIMUM CHARGE

This tariff is subject to a minimum monthly charge equal to the service charge.

RIDERS

Monthly charges computed under this tariff shall be adjusted in accordance with the applicable Commission-approved riders as contained herein.

PROMPT PAYMENT DISCOUNT

A discount of 1.5 percent will be allowed if account is paid in full within 15 days of date of bill.

METER READING AND BILLING

Meters may be read in units of 10kWh and the nearest 0.1 kW and bills rendered accordingly.

TERM OF CONTRACT

A written contract may, at the Company's option, be required to fulfill the provisions of the Terms and Conditions of Service.

SPECIAL TERMS AND CONDITIONS

This tariff is subject to the Company's Terms and Conditions of Service.

This tariff is intended for single-phase residential service. Where the residential customer requests three-phase service, this tariff will apply if the residential customer pays to the Company the difference between constructing single-phase service and three-phase service. If the Company determines the electricity supplied is primarily used for commercial or industrial purposes, the applicable general service tariff will apply to such service.

KINGSPORT POWER COMPANY d/b/a AEP, Appalachian Power

Issued: September 1, 2016-2022 September 1, 2016

By: Charles Patton Christian T. Beam, President

Original Sheet Number 6
T.R.A.T.P.U.C. Tariff Number
Effective: July 1,

D

TARIFF R.S.-T.O.D. (Residential Time-of-Day Electric Service) (Closed to new customers)

AVAILABILITY OF SERVICE

Camrian Charge

Available for residential electric service through one single-phase multiple-register meter capable of measuring electrical energy consumption during the on-peak and off-peak billing periods to individual residential customers. Availability is limited to the first 250 customers applying for service under this tariff.

MONTHLY RATE

Service Charge	\$ 20.70 17.47 per customer	Ъ
Energy Charge:		
	For all KWH used during the on-peak billing period <u>1.8760.943</u> cents per KWH	D
Tariff Code 031	For all KWH used during the off-peak billing period 0.000 943 cents per KWH	I

\$ 26.7017.47 per quetemen

For the purpose of this tariff, the on-peak billing period is defined as 6:00 a.m. to 9:00 p.m. local time for all weekdays, Monday through Friday. The off-peak billing period is defined as 9:00 p.m. to 6:00 a.m. for all weekdays, all hours of the day on Saturdays and Sundays, and the legal holidays of New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

MINIMUM CHARGE

This tariff is subject to a minimum monthly charge equal to the service charge.

FUEL AND PURCHASED POWER ADJUSTMENT-RIDERS

Monthly charges computed under this tariff shall be adjusted in accordance with the applicable Commission-approved riders as contained herein.

All bills for service according to the rates set forth herein will include charges under the Fuel and Purchased Power Adjustment Rider.

PROMPT PAYMENT DISCOUNT

A discount of 1.5 percent will be allowed if account is paid in full within 15 days of date of bill.

TERM OF CONTRACT

A written contract may, at the Company's option, be required to fulfill the provisions of the Terms and Conditions of Service.

SPECIAL TERMS AND CONDITIONS

This tariff is subject to the Company's Terms and Conditions of Service.

This tariff is intended for single-phase residential service. Where the residential customer requests three-phase service, this tariff will apply if the residential customer pays to the Company the difference between constructing single-phase service and three-phase service. If the Company determines the electricity supplied is primarily Where motors or heating equipment are used for commercial or industrial purposes, the applicable general service tariff will apply to such service.

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By: Charles Patton Christian T. Beam, President

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KINGSPORT POWER COMPANY d/b/a AEP Appalachian Power Kingsport, Tennessee

Original Sheet Number 7-1 T.R.A.T.P.U.C. Tariff Number 32

TARIFF S. G. S. (Small General Service)

AVAILABILITY OF SERVICE

Available for general service to customers with normal maximum demands of less than 10 KW.

MONTHLY RATE (Tariff Codes 231-233)

Service Charge	\$ <u>15.25</u> 21.35 per customer	1
Energy Charge:		_
For the first 600 KWH used per month	3. <u>364225</u> cents per KWH	I
For all over 600 KWH used per month	2.215 076 cents per KWH	I

MINIMUM CHARGE

This tariff is subject to a minimum monthly charge equal to the service charge.

FUEL AND PURCHASED POWER ADJUSTMENT RIDERS

Monthly charges computed under this tariff shall be adjusted in accordance with the applicable Commission-approved riders as contained herein.

All bills for service according to the rates set forth herein will include charges under the Fuel and Purchased Power Adjustment Rider.

PROMPT PAYMENT DISCOUNT

A discount of 1.5 percent will be allowed if account is paid in full within 15 days of date of bill.

TERM OF CONTRACT

A written contract may, at the Company's option, be required to fulfill the provisions of the Terms and Conditions of Service.

SPECIAL TERMS AND CONDITIONS

This tariff is subject to the Company's Terms and Conditions of Service.

Issued: September 1, 2016

2022 September 1, 2016

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By: Charles Patton Christian T. Beam, President

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KINGSPORT POWER COMPANY d/b/a AEP Appalachian Power Kingsport, Tennessee

Original Sheet Number 8-1 T.R.A.T.P.U.C. Tariff Number 32

TARIFF M. G. S. (Medium General Service)

AVAILABILITY OF SERVICE

Available for general service customers with normal maximum demands of 10 KW or greater. Service is not available for new customers with normal maximum demands in excess of 100 KW. Customers receiving service under Tariff S.G.S. prior to June 3, 1987 with demands in excess of 100 KW may continue to qualify for service under this tariff until such time as their normal maximum demand exceeds the existing contract capacity.

MONTHLY RATE Service Voltage

<u>Tariff Cod</u> e	Secondary Pri 235	<u>mary</u> 237		
Service Charge Per Customer	. \$ <u>50</u> 43.00	\$190.00		I, N
Energy Charge: For all KWH equal to the first 200 times the KW of monthly billing demand	3. <u>588</u> 438 cents	2.927 cents		I, N
For all KWH in excess of 200 times the KW of monthly billing demand	0.000 cents	0.000 cents		N, N
Demand Charge:	\$5.05 <u>2.20</u>		\$4 912.15	I, I

MINIMUM CHARGE

This tariff is subject to a minimum monthly charge equal to the sum of the service charge and the product of the demand charge and the monthly billing demand.

FUEL AND PURCHASED POWER ADJUSTMENT-RIDERS

Monthly charges computed under this tariff shall be adjusted in accordance with the applicable Commission-approved riders as contained herein.

All bills for service according to the rates set forth herein will include charges under the Fuel and Purchased Power Adjustment Rider.

PROMPT PAYMENT DISCOUNT

A discount of 1.5 percent will be allowed if account is paid in full within 15 days of date of bill.

MEASUREMENT OF ENERGY AND DETERMINATION OF DEMAND

Energy supplied hereunder will be delivered through not more than one single-phase and/or one poly-phase meter. The billing demand in KW shall be taken each month as the single highest 15-minute integrated peak in kilowatts as registered during the month by a demand meter or indicator, or at the Company's option, as the highest registration of a thermal type demand meter or indicator. Where energy is delivered through two meters, the monthly billing demand will be taken as the sum of the two demands separately determined. For the purpose of billing, no demand shall be taken as less than 6 KW.

METERED VOLTAGE

The rates set forth in this tariff are based upon the delivery and measurement of energy at the same voltage, thus measurement will be made at or compensated to the delivery voltage. At the sole discretion of the Company, such compensation may be achieved through the use of loss compensating equipment, the use of formulas and KW to calculate losses or the application of multipliers to the metered quantities. In such cases, the metered KWH and KW values will be adjusted for billing purposes. If the Company elects to adjust KWH and KW based on multipliers, the adjustment shall be in accordance with the following:

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By: Charles Patton Christian T. Beam, President

Pursuant to an Order in

Docket Number 16-

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KgPCo Exhibit No. 3 Witness: WKC Page 33 of 75

- (1) Measurements taken at the low-side of a customer-owned transformer will be multiplied by 1.01.
- (2) Measurements taken at the high-side of a Company-owned transformer will be multiplied by 0.98.

Issued: September 1, 2016

2022 September 1, 2016

By: Charles Patton Christian T. Beam, President

Pursuant to an Order in Docket Number 16-

July 1,

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KINGSPORT POWER COMPANY d/b/a AEP Appalachian Power Number 2 Kingsport, Tennessee

Original Sheet Number 8-32 T.R.A.<u>T.P.U.C.</u>

TARIFF M. G. S. (Medium General Service)

TERM OF CONTRACT

A written contract may, at the Company's option, be required to fulfill the provisions of the Terms and Conditions of Service.

SPECIAL TERMS AND CONDITIONS

This tariff is subject to the Company's Terms and Conditions of Service.

This tariff is also available to customers having other sources of electric energy supply. Where such conditions exist, the customer shall contract for the maximum amount of demand in KW which the Company might be required to furnish, but not less than 10 KW nor more than 100 KW. The Company shall not be obligated to supply demands in excess of that contracted for. In the event that the customer's actual demand, as determined by demand meter or indicator, in any month exceeds the amount of the customer's then existing contract demand, the contract demand shall then be increased automatically to the maximum demand so created by the customer. Where service is supplied under the provisions of this paragraph, the billing demand defined under paragraph "Measurement of Energy and Determination of Demand" shall not be less than the Contract Demand.

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By: Charles Patton Christian T. Beam, President

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KINGSPORT POWER COMPANY d/b/a AEP Appalachian Power

Original Sheet Number 9 T.R.A.T.P.U.C. Tariff Number

Kingsport, Tennessee

TARIFF G.S.-T.O.D. (General Service - Time-of-Day)

AVAILABILITY OF SERVICE

Available for general service customers with demands greater than 10 KW but less than 100 KW. Current customers with demands in excess of 100 KW will continue to receive service under this tariff. Availability is limited to the first 100 customers applying for service under this tariff.

MONTHLY RATE (Tariff Code 229)

Service Charge	N
Energy Charge: For all KWH used during the on-peak billing period	D
For all KWH used during the off-peak billing period	ī

For the purpose of this tariff, the on-peak billing period is defined as 6:00 a.m. to 9:00 p.m. local time for all weekdays, Monday through Friday. The off-peak billing period is defined as 9:00 p.m. to 6:00 a.m. for all weekdays, all hours of the day on Saturdays and Sundays, and the legal holidays of New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

MINIMUM CHARGE

This tariff is subject to a minimum monthly charge equal to the service charge.

FUEL AND PURCHASED POWER ADJUSTMENT RIDERS

Monthly charges computed under this tariff shall be adjusted in accordance with the applicable Commission-approved riders as contained herein.

All bills for service according to the rates set forth herein will include charges under the Fuel and Purchased Power Adjustment Rider.

PROMPT PAYMENT DISCOUNT

A discount of 1.5 percent will be allowed if account is paid in full within 15 days of date of bill.

METERED VOLTAGE

The rates set forth in this tariff are based upon the delivery and measurement of energy at the same voltage, thus measurement will be made at or compensated to the delivery voltage. At the sole discretion of the Company, such compensation may be achieved through the use of loss compensating equipment, the use of formulas to calculate losses or the application of multipliers to the metered quantities. In such cases, the metered KWH values will be adjusted for billing purposes. If the Company elects to adjust KWH based on multipliers, the adjustment shall be 0.98 when measurements are taken at the high-side of a Company-owned transformer.

TERM OF CONTRACT

A written contract may, at the Company's option, be required to fulfill the provisions of the Terms and Conditions of Service.

SPECIAL TERMS AND CONDITIONS

This tariff is subject to the Company's Terms and Conditions of Service.

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By: Charles Patton Christian T. Beam, President

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KINGSPORT POWER COMPANY d/b/a AEP Appalachian Power Number 32 Kingsport, Tennessee

Original Sheet Number 10-1 T.R.A.T.P.U.C. Tariff

TARIFF L. G. S. (Large General Service)

AVAILABILITY OF SERVICE

Available for general service customers with normal maximum demands greater than 100 KVA but less than 3,000 KVA.

MONTHLY RATE

Tariff Code	Service <u>Voltage</u>	Demand Charge <u>per KVA</u>	Energy Charge per KWH	Service Charge		
240-242	Secondary	\$ <u>10.466.72</u>	0. <u>801</u> -	787 cents	\$156.00	I, I, N
244-246	Primary	\$ <u>8.635.96</u>	0. <u>775</u> 851 cents	\$330.00		I, D, N
248	Subtransmission/Transmission	\$ <u>3.31</u> 5.84	0.759 <u>835</u> cents	\$832.00		I, D, N

MINIMUM CHARGE

This tariff is subject to a minimum monthly charge equal to the sum of the service charge and the product of the demand charge and the monthly billing demand.

FUEL AND PURCHASED POWER ADJUSTMENT RIDERS

Monthly charges computed under this tariff shall be adjusted in accordance with the applicable Commission-approved riders as contained herein.

All bills for service according to the rates set forth herein will include charges under the Fuel and Purchased Power Adjustment Rider.

PROMPT PAYMENT DISCOUNT

A discount of 1.5 percent will be allowed if account is paid in full within 15 days of date of bill.

MEASUREMENT OF ENERGY AND DETERMINATION OF DEMAND

Energy supplied hereunder will be delivered through not more than one single-phase and/or one poly-phase meter. Billing demand in KVA shall be taken each month as the single highest 15-minute integrated peak in KW as registered during the month by 15-minute integrating demand meter or indicator, or at the Company's option as the highest registration of a thermal type demand meter or indicator, divided by the average monthly power factor established during the month, corrected to the nearest KVA. Where energy is delivered through two meters, the billing demand will be taken as the sum of the two demands separately determined. Monthly billing demand established hereunder shall not be less than 60 percent of the greater of (a) the customer's contract capacity, (b) the customer's highest previously established monthly billing demand during the past 11 months or (c) 100 KVA. If more than 50 percent of the customer's contract capacity, (b) the customer's highest previously established monthly billing demand will be 25 percent of the greater of (a) the customer's contract capacity, (b) the customer's highest previously established monthly billing demand during the past 11 months or (c) 100 KVA for the billing months of April through September.

Issued: September 1, 2016-2022 September 1, 2016

By: Charles Patton Christian T. Beam, President

Effective: <u>July</u>

KINGSPORT POWER COMPANY d/b/a AEP Appalachian Power Number 32 Kingsport, Tennessee

Original Sheet Number 10-2 T.R.A.T.P.U.C. Tariff

TARIFF L. G. S. (Large General Service)[

METERED VOLTAGE

The rates set forth in this Tariff are based upon the delivery and measurement of energy at the same voltage, thus measurement will be made at or compensated to the delivery voltage. At the sole discretion of the Company such compensation may be achieved through the use of loss compensating equipment, the use of formulas to calculate losses or the application of multipliers to the metered quantities. In such cases, the metered KWH and KVA values will be adjusted for billing purposes. If the Company elects to adjust KWH and KVA based on multipliers, the adjustment shall be in accordance with the following:

- Measurements taken at the low-side of a customer-owned transformer will be multiplied by 1.01.
- 2. Measurements taken at the high-side of a Company-owned transformer will be multiplied by 0.98.

TERM OF CONTRACT

For customers with annual average demands greater than 500 KVA, contracts will be required for an initial period of not less than 1 year and shall remain in effect thereafter until either party shall give at least 6 months' prior written notice to the other of the intention to discontinue service under the terms of this tariff. For customers with demands less than 500 KVA, a written contract may, at the Company's option, be required to fulfill the provisions of the Terms and Conditions of Service.

Where new Company facilities are required, the Company reserves the right to require initial contracts for periods greater than 1 year for all customers served under this tariff.

A new initial contract period will not be required for existing customers who increase their contract requirements after the original initial period unless new or additional facilities are required.

The Company shall not be required to supply capacity in excess of that contracted for except by mutual agreement.

SPECIAL TERMS AND CONDITIONS

This tariff is subject to the Company's Terms and Conditions of Service.

This tariff is also available to customers having other sources of energy who desire to purchase standby or back-up service from the Company. Where such service is required, the customer can either take service under Tariff S.B.S. or under the provisions of this paragraph. The customer shall contract for the maximum amount of demand in KVA which the Company might be required to furnish, but not less than 100 KVA nor more than 3,000 KVA. The Company shall not be obligated to supply demands in excess of that contracted for. Where service is supplied under the provisions of this paragraph, the billing demand each month shall be the highest determined for the current and previous two billing periods, and the minimum monthly charge shall be as set forth under paragraph "Minimum Charge" above.

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By: Charles Patton Christian T. Beam, President

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Original Sheet Number 11-1
T.R.A.T.P.U.C. Tariff Number 32

TARIFF I.P. (Industrial Power)

AVAILABILITY OF SERVICE

Available to industrial and large commercial customers. Customers shall contract for a definite amount of electrical capacity in KW which shall be sufficient to meet normal maximum requirements but in no case shall the capacity contracted for be less than 3,000 KW. Contract capacities will be specified in multiples of 100 KW.

MONTHLY RATE

		Demand	Off-Peak	Energy		
Tariff	Service	Charge	Excess Demand	Charge	Service	
Code	<u>Voltage</u>	per KW	Charge per KW	per KWH	<u>Charge</u>	
327	Secondary	\$ <u>13.18</u> 5.70	\$ 5.70 13.18	0.000 cents	\$308.00	I, I, N, N
322	Primary	\$ 4.41 <u>6.70</u>	\$ 4.41 <u>6.70</u>	0.000 cents	\$480.00	I, I, N, N
323, 324	Subtransmission/Transmission	\$ <u>4.00</u> 2.41	\$ <u>0.00</u> 1.42	0.000 cents	\$3,860.00	I, D, N, N

Reactive Demand Charge for each Kilovar of Lagging Reactive Demand in excess of 50 percent of the KW of monthly metered demand \$0.75 per KVAR

MINIMUM CHARGE

This tariff is subject to a minimum monthly charge equal to the sum of the service charge and the product of the demand charge and the monthly billing demand.

FUEL AND PURCHASED POWER ADJUSTMENT RIDERS

Monthly charges computed under this tariff shall be adjusted in accordance with the applicable Commission-approved riders as contained herein.

All bills for service according to the rates set forth herein will include charges under the Fuel and Purchased Power Adjustment Rider.

PROMPT PAYMENT DISCOUNT

A discount of 1.5 percent will be allowed if account is paid in full within 15 days of date of bill.

DETERMINATION OF DEMAND

The billing demand in KW shall be taken each month as the single highest 30-minute integrated peak in KW as registered during the on-peak period by a demand meter or indicator. The monthly billing demand so established shall in no event be less than 60% of the greater of (a) the customer's contract capacity or (b) the customer's highest previously established monthly billing demand during the past 11 months nor less than 3,000 KW. The off-peak excess demand shall be the amount by which the demand created during the off-peak period exceeds the monthly billing demand.

The reactive demand in KVARs shall be taken each month as the single highest 30-minute integrated peak in KVARs as registered during the month by a demand meter or indicator, or, at the Company's option, as the highest registration of a thermal type demand meter or indicator.

For the purpose of this provision, the on-peak billing period is defined as 6 a.m. to 9 p.m. local time for all weekdays, Monday through Friday. The off-peak billing period is defined as 9 p.m. to 6 a.m. for all weekdays, all hours of the day on Saturdays and Sundays, and the legal holidays of New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day.

METERED VOLTAGE

The rates set forth in this tariff are based upon the delivery and measurement of energy at the same voltage, thus measurement will be made at or compensated to the delivery voltage. At the sole discretion of the Company, such compensation may be achieved through the use of loss compensating equipment, the use of formulas to calculate losses or the application of multipliers to the metered quantities. In such cases, the metered KWH and KW values will be adjusted for billing purposes. If the Company elects to adjust KWH and KW based on multipliers, the adjustment shall be in accordance with the following:

- 1. Measurements taken at the low-side of a customer-owned transformer will be multiplied by 1.01.
- 2. Measurements taken at the high-side of a Company-owned transformer will be multiplied by 0.98.

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Original Sheet Number 11-2 T.R.A.T.P.U.C. Tariff Number 32

TARIFF I.P. (Industrial Power)

TERM OF CONTRACT

Contracts under this tariff will be made for an initial period of not less than 5 years and shall remain in effect thereafter until either party shall give at least 12 months' written notice to the other of the intention to discontinue service under the terms of this tariff. Where new Company facilities are required, the Company reserves the right to require initial contracts for periods of greater than 5 years.

A new initial contract period will not be required for existing customers who increase their contract requirements after the original initial period unless new or additional facilities are required.

The Company shall not be required to supply capacity in excess of that contracted for except by mutual agreement.

SPECIAL TERMS AND CONDITIONS

This tariff is subject to the Company's Terms and Conditions of Service.

This tariff is also available to customers having other sources of energy who desire to purchase standby or back-up service from the Company. Where such service is required, the customer can either take service under Tariff S.B.S. or under the provisions of this paragraph. The customer shall contract for the maximum amount of demand in KW which the Company might be required to furnish, but not less than 3,000 KW. The Company shall not be obligated to supply demands in excess of that contracted for. Where service is supplied under the provisions of this paragraph, the billing demand each month shall be the highest determined for the current and previous two billing periods, and the minimum monthly charge shall be as set forth under paragraph "Minimum Charge" above.

A customer's plant is considered as one or more buildings which are served by a single electrical distribution system provided and operated by customer. When the size of the customer's load necessitates the delivery of energy to the customer's plant over more than one circuit, the Company may elect to connect it circuits to different points on the customer's system irrespective of contrary provisions in Terms and Conditions of Service.

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Effective: July

Original Sheet Number 12 T.R.A.T.P.U.C. Tariff Number

Kingsport, Tennessee

TARIFF E. H. G. (Electric Heating General)

AVAILABILITY OF SERVICE

Available for the total requirements of general service customers who operate electric heating equipment which supplies the entire space heating requirements of the customer's premises.

MONTHLY RATE (Tariff Codes 208-209)

Service Charge	N
Energy Charge	I
Demand Charge	I

MINIMUM CHARGE

This tariff is subject to a minimum monthly charge equal to the sum of the service charge and the product of the demand charge and the monthly billing demand.

FUEL AND PURCHASED POWER ADJUSTMENT RIDERS

Monthly charges computed under this tariff shall be adjusted in accordance with the applicable Commission-approved riders as contained herein.

All bills for service according to the rates set forth herein will include charges under the Fuel and Purchased Power Adjustment Rider.

PROMPT PAYMENT DISCOUNT

A discount of 1.5 percent will be allowed if account is paid in full within 15 days of date of bill.

MEASUREMENT OF ENERGY AND DETERMINATION OF DEMAND

Energy supplied hereunder will be delivered through not more than one single-phase and/or one poly-phase meter. The billing demand will be taken monthly to be the highest registration of a thermal type demand meter. Where energy is delivered through two meters, the monthly billing demand will be taken as the sum of the two demands separately determined.

TERM OF CONTRACT

A written contract may, at the Company's option, be required to fulfill the provisions of the Terms and Conditions of Service.

SPECIAL TERMS AND CONDITIONS

This tariff is subject to the Company's Terms and Conditions of Service.

This tariff is available only at premises where at least 50 percent of the electrical load is located inside of buildings which are electrically heated.

When church buildings are electrically heated and are served through a separate meter and billed separately, the above energy rate applies, but there shall be no demand charge.

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By: Charles Patton Christian T. Beam, President

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KINGSPORT POWER COMPANY d/b/a AEP Appalachian Power

Original Sheet Number 13 T.R.A.T.P.U.C. Tariff Number

<u>32</u>

Kingsport, Tennessee

TARIFF C. S. (Church Service)

AVAILABILITY OF SERVICE

Available for service to churches. This tariff is available for the supply of service to church buildings, that is, to buildings whose primary purpose is to provide a place of worship; but is not available to other buildings which might be owned or operated by churches, such as residences, dormitories, parochial or other church schools, which generally operate throughout the week.

MONTHLY RATE (Tariff Code 221)

MINIMUM CHARGE

This tariff is subject to a minimum monthly charge equal to the service charge.

FUEL AND PURCHASED POWER ADJUSTMENT RIDERS

Monthly charges computed under this tariff shall be adjusted in accordance with the applicable Commission-approved riders as contained herein.

All bills for service according to the rates set forth herein will include charges under the Fuel and Purchased Power Adjustment Rider.

PROMPT PAYMENT DISCOUNT

A discount of 1.5 percent will be allowed if account is paid in full within 15 days of date of bill.

TERM OF CONTRACT

A written contract may, at the Company's option, be required to fulfill the provisions of the Terms and Conditions of Service.

SPECIAL TERMS AND CONDITIONS

This tariff is subject to the Company's Terms and Conditions of Service.

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Original Sheet Number 14 T.R.A.T.P.U.C. Tariff Number

<u>32</u>

Kingsport, Tennessee

TARIFF P. S. (Public Schools)

AVAILABILITY OF SERVICE

Available to public schools wholly supported by public taxation purchasing their entire requirements for electric service from the Company.

MONTHLY RATE (Tariff Code 640)

	N
Service Charge	I
Energy Charge	_

ELECTRIC HEATING

Where an entire school building, or an addition thereto, is heated 100 percent electrically, KWH in excess of 500 KWH per month multiplied by the number of classrooms in the entire school will be billed at the rate of 2.0070.505 cents per KWH subject to a Minimum Charge equal to the monthly service charge. (Tariff Code 641)

Where every energy requirement, including, but not limited to heating, cooling, and water heating, of an individual school building or an addition to an existing school building is supplied by electricity furnished by the Company, all energy for that building or addition shall be billed at 0.5052.007 cents per KWH subject to a Minimum Charge equal to the monthly service charge. (Tariff Code 642)

The term "classroom", for the purpose of determining billing under this provision, shall be defined as any room used regularly for the instruction of pupils, including but not limited to general classrooms, industrial shops, domestic science rooms, music rooms, kindergartens and laboratories. Customer shall furnish Company upon request information necessary to establish the number of classrooms to be used for billing purposes hereunder.

MINIMUM CHARGE

This tariff is subject to a minimum monthly charge equal to the service charge.

FUEL AND PURCHASED POWER ADJUSTMENT RIDERS

Monthly charges computed under this tariff shall be adjusted in accordance with the applicable Commission-approved riders as contained herein.

All bills for service according to the rates set forth herein will include charges under the Fuel and Purchased Power Adjustment Rider.

PROMPT PAYMENT DISCOUNT

A discount of 1.5 percent will be allowed if account is paid in full within 15 days of date of bill.

MEASUREMENT OF ENERGY

Energy supplied hereunder will be delivered through not more than 1 single-phase and/or 1 poly-phase meter.

METERED VOLTAGE ADJUSTMENT

The rates set forth in this tariff are based upon the delivery and measurement of energy at the same voltage, thus measurement will be made at or compensated to the delivery voltage. At the sole discretion of the Company, such compensation may be achieved through the use of loss compensating equipment, the use of formulas to calculate losses or the application of multipliers to the metered quantities. In such cases, the metered KWH values will be adjusted for billing purposes. If the Company elects to adjust KWH based on multipliers, the adjustment shall be in accordance with the following:

- 1. Measurements taken at the low-side of a customer-owned transformer will be multiplied by 1.01.
- Measurements taken at the high-side of a Company-owned transformer will be multiplied by 0.98.

TERM OF CONTRACT

A written contract, may, at the Company's option, be required to fulfill the provisions of the Terms and Conditions of Service.

SPECIAL TERMS AND CONDITIONS

This tariff is subject to the Company's Terms and Conditions of Service.

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By: Charles Patton Christian T. Beam, President

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KgPCo Exhibit No. 3 Witness: WKC Page 43 of 75

KINGSPORT POWER COMPANY d/b/a AEP Appalachian Power Number 32 Kingsport, Tennessee

Original Sheet Number 15-1 T.R.A.<u>T.P.U.C.</u> Tariff

TARIFF E.O.P.

Emergency Operating Plan

Maintained on file with the T.R.A. is the current Emergency Operating Plan (E.O.P.) which is updated periodically as circumstances dictate.

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By: Charles Patton Christian T. Beam, President

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Original Sheet Number 16-1 T.R.A.P.U.C. Tariff Number 32

TARIFF O. L. (Outdoor Lighting)

AVAILABILITY OF SERVICE

Available for outdoor lighting <u>distribution service</u> to individual customers, <u>provided the lighting location designated by the customer is reasonably accessible to the Company's service vehicles without causing damage to the customer's or other's property. <u>except that nNo</u> light shall be installed on streets covered by municipal street lighting systems or at a location which might interfere with such system. <u>LED Equivalent options will be utilized for all new installations</u>. <u>Mercury vapor lamps will no longer be available for new installations or for repair or replacement of existing units</u>.</u>

MONTHLY RATE

OVERHEAD LIGHTING SERVICE

A. For each of the following, the Company will provide lamp, photo-electric relay control equipment, with luminaire and an upsweep arm not over 6 feet in length, controlled by a photo-electric relayan shall mount same on an existing wood distribution pole, where service is supplied from an existing pole and which is connected to secondary facilities of the Company:

Tariff Code	Size of Lamp In Lumens (Approximate)	Nominal Lamp Wattage (Approximate)	Lamp Type	Rate Per Lamp Per Month
094	9,500	100	High Pressure Sodium	\$ <u>8.47</u> 7.26
097	22,000	200	High Pressure Sodium	\$ <u>12.07</u> 10.34
115	9,500	100	High Pressure Sodium Floodlight	\$ <u>11.05</u> 9.47
107	22,000	200	High Pressure Sodium Floodlight	\$ <u>12.86</u> 11.02
109	50,000	400	High Pressure Sodium Floodlight	\$ <u>16.65</u> 14.27
120	50,000	400	High Pressure Sodium Shoebox Fixture	\$ <u>20.55</u> 17.61
110	17,000	250	Metal Halide Floodlight	\$ <u>14.86</u> 12.73
116	28,000	400	Metal Halide Floodlight	\$ <u>17.11</u> 14.66
<u>163</u>	<u>5,000</u>	<u>50</u>	LED OH	<u>\$4.90</u>
<u>152</u>	<u>9,800</u>	<u>100</u>	<u>LED OH</u>	<u>\$5.48</u>
165	23,000	200	LED OH	\$7.99
167	20,400	<u>150</u>	LED Flood OH	\$7.99
172	38,700	300	LED Flood OH	\$10.23

Each kilowatt-hour of energy consumed is subject to all applicable riders and surcharges.

When other additional overhead facilities are to be installed by the Company, the customer will, in addition to the above monthly charge, pay a CIAC in advance representing the installation cost of such additional overhead facilities extending from the nearest or most suitable pole of the Company to the point designated by the customer for the installation of said fixture, provided the location designated by the customer is reasonably accessible to the Company's service vehicles without causing damage to the customer's or other's property. In lieu of paying in advance for the installation of additional facilities, the customer may, for the following facilities only, pay the following:

For each additional pole and overhead wire span not over 150 feet:

Wood Pole \$ 7.95 per month (35 foot/5)

When service cannot be supplied from an existing pole of the Company carrying a secondary circuit, the Company will install one pole and one span of secondary circuit of not over 150 feet for an additional charge of \$7.95 per month or one span of secondary circuit only of not over 150 feet for an additional charge of \$1.40 per month.

When facilities other than those specified above are to be installed by the Company, the customer will, in addition to the above monthly charge or charges, pay in advance the installation cost for the new overhead facilities extending from the nearest or most suitable pole of the Company to the point designated by the customer for the installation of said lamp.

High pressure sodium and metal halide lamps will be available for new installations only.

B. After January 1, 1983 Mercury Vapor outdoor lighting service will be available only to customers then being served at the rates set out herein and at the present service location.

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Pursuant to an Order in Docket Number 16-

KgPCo Exhibit No. 3 Witness: WKC Page 45 of 75

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Tariff Code	Size of Lamp in Lumens	Nominal Lamp Wattage	Lamp Type	Rate Per Lamp Per Month
093	7,000	175	Mercury Vapor	\$ <u>10.57</u> 9.06
095	20,000	400	Mercury Vapor	\$ <u>17.38</u> 14.89

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Original Sheet Number 16-2 T.R.A.P.U.C. Tariff Number 32

TARIFF O. L. (Outdoor Lighting)

POST-TOPUNDERGROUND LIGHTING SERVICE

A. <u>For each of the following, tThe Company will provide lamp, photo-electric relay control, post-top luminaire, post, and installation, (the type and height of which will be consistent with the Company's construction standards) including underground wiring, for a distance of 30 feet from the Company's existing secondary <u>circuitsfacilities</u>.</u>

Tariff Code	Size of Lamp In Lumens	Nominal Lamp Wattage	Lamp Type	Rate Per Lamp Per Month
121	(Approximate) 6,300	(Approximate) 70	High Pressure Sodium	\$13.54
111	9,500	100	High Pressure Sodium	\$14.42 12.36
122	16,000	150	High Pressure Sodium	\$44.17 37.85
103	27,500	250	High Pressure Sodium	\$46.37 39.73
<u>104</u>	50,000	<u>400</u>	High Pressure Sodium	\$49.54
123	22,000	200	High Pressure Sodium Floodlight	\$ <u>41.48</u> 35.54
124	50.000	400	High Pressure Sodium Floodlight	\$ <u>48.90</u> 41.90
<u>125</u>	<u>36,000</u>	<u>400</u>	Metal Halide	<u>\$49.66</u>
126	36.000	400	Metal Halide Floodlight	\$ <u>49.17</u> 42.13
<u>164</u>	<u>5,000</u>	<u>50</u>	<u>LED UG</u>	\$13.33
<u>153</u>	<u>9,800</u>	<u>100</u>	<u>LED UG</u>	\$13.91
<u>169</u>	<u>15,700</u>	<u>115</u>	LED SHOEBOX UG	\$16.99
166	23,000	200	LED UG	\$16.41
<u>171</u>	<u>4,300</u>	<u>40</u>	LED Postop UG	<u>\$14.45</u>
<u>158</u>	<u>6,300</u>	<u>65</u>	LED Postop UG	<u>\$14.63</u>
<u>168</u>	<u>20,400</u>	<u>150</u>	LED Flood UG	<u>\$16.75</u>
173	38,700	300	LED Flood OH	\$18.99

B. After January 1, 1983 Mercury Vapor outdoor lighting service will be available only to customers then being served at the rates set out herein and at the present service location.

Tariff Code	Size of Lamp in Lumens	<u>Nominal Lamp</u> <u>Wattage</u>	<u>Lamp Type</u>	Rate Per Lamp Per Month
099	7,000	<u>175</u>	Mercury Vapor	<u>\$16.16</u>

- CB. When a customer requires an underground circuit longer than 30 feet from existing secondary facilities for undergroundpost top lighting service, the customer will pay to the Company, in advance, a charge for the additional length of underground circuit.
- (1) Pay to the Company in advance a charge of \$5.62 per foot for the length of underground circuit in excess of 30 feet; or
- (2) Pay a monthly facilities charge of \$1.00 for each 25 feet (or fraction thereof) of underground circuit in excess of 30 feet.

In addition, the customer shall reimburse the Company for all state and federal income taxes associated with such charges.

Fixtures and poles will be standard utility grade secured from the Company's normal suppliers. The Company will be the sole judge of the suitability of the types of fixtures and poles used.

FUEL AND PURCHASED POWER ADJUSTMENT RIDERS

Monthly charges computed under this tariff shall be adjusted in accordance with the applicable Commission-approved riders as contained herein. All bills for service according to the rates set forth herein will include charges under the Fuel and Purchased Power Adjustment Rider.

PROMPT PAYMENT DISCOUNT

A discount of 1.5 percent will be allowed if account is paid in full within 15 days of date of bill.

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By: Charles PattonChristian T Beam, President

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TERM OF CONTRACT

Contracts under this tariff will be for not less than 1 year for residential or farm customers, not less than 3 years for commercial or industrial customers, or not less than 5 years for other customers. The Company reserves the right to include in the contract such other provisions as it may deem necessary to insure payment of bills throughout the term of the contract.

HOURS OF LIGHTING

All lamps shall burn from one-half hour after sunset until one-half hour before sunrise, every night and all night, or approximately 4,000 hours per annum.

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By: Charles Patton Christian T Beam, President

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KINGSPORT POWER COMPANY d/b/a AEP Appalachian Power

Original Sheet Number 16-3 <u>T.R.A.T.P.U.C.</u> Tariff Number

<u>32</u>

Kingsport, Tennessee

TARIFF O. L. (Outdoor Lighting)

OWNERSHIP OF FACILITIES

All facilities necessary for service including fixtures, controls, poles, transformers, secondaries, lamps and other appurtenances shall be owned and maintained by the Company. All service and necessary maintenance will be performed only during the regular scheduled working hours of the Company. Burned out lamps will normally be replaced within 48 hours after notification by the customer.

TERM

The minimum billing term for new residential outdoor lighting installations will be 12 months. At the Company's option, a written agreement may be required pursuant to the Extension of Service provision of the Company's Terms and Conditions of Standard Service. The minimum billing term for new commercial, industrial and other non-residential outdoor lighting installations will be 36 months. At the Company's option, a written agreement may be required pursuant to the Extension of Service provision of the Company's Terms and Conditions of Standard Service.

SPECIAL TERMS AND CONDITIONS

This tariff is subject to the Company's Terms and Conditions of Service.

In cases where the Company is requested to replace an existing mercury vapor lamp with a high pressure sodium or metal halide lamp, the right is reserved to charge the customer an amount commensurate with the cost involved.

All new lighting installations must be requested by property owner.

CONVERSION CHARGE

Upon Customer request, the Company will convert an existing non-LED luminaire, currently billed in accordance with the Company's Schedule O.L., to an available LED luminaire upon payment, in advance, by the Customer to the Company of the applicable Conversion Charge.

The Conversion Charge for replacing an existing non-LED luminaire to a LED luminaire will be \$31.00.

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Original Sheet Number 17-1

T.R.A.T.P.U.C. Tariff Number 32

TARIFF S. L. (Street Lighting)

AVAILABILITY OF SERVICE

Available for street lighting distribution service to individual customers, provided the lighting location designated by the customer is reasonably accessible to the Company's service vehicles without causing damage to the customer's or other's property. LED Equivalent options will be utilized for all new installations.

MONTHLY RATE (Tariff Code 523)

OVERHEAD LIGHTING SERVICE

A. For each of the following, the Company will provide lamp, photo-electric relay control equipment, luminaire and upsweep arm not over 6 feet in length, and shall mount same on an existing wood distribution pole which is connected to secondary facilities of the Company:

Size of Lamp In Lumens (Approximate)	Nominal Lamp Wattage (Approximate)	<u>Lamp Type</u>	Rate Per Lamp Per Month	Cost of Facilities Included in Rates (\$)1
<u>9,500</u>	<u>100</u>	High Pressure Sodium	<u>\$7.45</u>	
<u>16,000</u>	<u>150</u>	High Pressure Sodium	\$8.62	
22,000	<u>200</u>	High Pressure Sodium	\$9.09	
<u>28,000</u>	<u>250</u>	High Pressure Sodium	<u>\$22.26</u>	
<u>50,000</u>	<u>400</u>	High Pressure Sodium	<u>\$27.16</u>	
<u>5,000</u>	<u>50</u>	<u>LED OH</u>	<u>\$4.90</u>	<u>\$342.48</u>
<u>9,800</u>	<u>100</u>	<u>LED OH</u>	<u>\$5.48</u>	<u>\$379.70</u>
<u>23,000</u>	<u>200</u>	<u>LED OH</u>	<u>\$7.99</u>	<u>\$541.38</u>

When facilities other than those specified above are to be installed by the Company, the customer will, in addition to the above monthly charge or charges, pay in advance the installation cost for the new overhead facilities extending from the nearest or most suitable pole of the Company to the point designated by the customer for the installation of said lamp.

B. After January 1, 1983 Mercury Vapor outdoor lighting service will be available only to customers then being served at the rates set out herein and at the present service location.

Size of Lamp in Lumens (Approximate)	Nominal Lamp Wattage (Approximate)	<u>Lamp Type</u>	Rate Per Lamp Per Month
<u>7,000</u>	<u>175</u>	Mercury Vapor	<u>\$7.74</u>
20,000	<u>400</u>	Mercury Vapor	<u>\$16.36</u>

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TARIFF S. L. (Street Lighting) (Continued)

UNDERGROUND LIGHTING SERVICE

BA. The Company will provide lamp, photo-electric relay control, post-top luminaire, post, and installation, including underground wiring, for a distance of 30 feet from the Company's existing secondary circuits.

Size of Lamp In Lumens (Approximate)	Nominal Lamp Wattage (Approximate)	Lamp Type	Rate Per Lamp Per Month	Cost of Facilities Included in Rates (\$)¹	
<u>9,500</u>	<u>100</u>	<u>High Pressure Sodium</u>	<u>\$5.08</u>		
16,000	<u>150</u>	High Pressure Sodium	<u>\$12.21</u>		
<u>28,000</u>	<u>250</u>	High Pressure Sodium	<u>\$23.32</u>]]
50,000	<u>400</u>	High Pressure Sodium	<u>\$27.16</u>		
140,000	<u>1,000</u>	High Pressure Sodium	<u>\$82.92</u>]]
5,000	<u>50</u>	LED UG	\$13.33	\$1,085.89	
9,800	100	LED UG	\$13.91	\$1,123.11	
15,700	<u>115</u>	LED SHOEBOX UG	\$16.99	\$1,322.02	
23,000	<u>200</u>	<u>LED UG</u>	<u>\$16.41</u>	<u>\$1,284.80</u>	
4,300	<u>40</u>	LED Postop UG	\$14.45	\$1,122.87	
6,300	<u>65</u>	LED Postop UG	<u>\$16.11</u>	\$1,265.02]
8,900	<u>60</u>	LED Decorative Postop UG	<u>\$21.88</u>	\$1,637.24]
7,800	90	LED Decorative Postop UG	\$28.01	\$2,032.73	1
140,000	1,000	High Pressure Sodium-Energy only	\$22.10		I
22,000	200	High Pressure Sodium-Energy only	\$5.77		1

Fixtures and poles will be standard utility grade secured from the Company's normal suppliers. The Company will be the sole judge of the suitability of the types of fixtures and poles used.

The rates in Overhead lighting and Underground lighting are based on the Company's investment in standard facilities.—For LED lights, the Company's investment in standard facilities is the amount as shown adjacent to the rate¹. When the investment in new standard facilities, including costs for service from underground, exceeds the predescribed amount, the difference will be paid to the Company by the Customer as a Contribution in Aid of Construction (CIAC). The customer shall also reimburse the Company for all state and federal income taxes associated with the CIAC.

RIDERS

Monthly charges computed under this tariff shall be adjusted in accordance with the applicable Commission-approved riders as contained herein.

PROMPT PAYMENT DISCOUNT

A discount of 1.5 percent will be allowed if account is paid in full within 15 days of date of bill.

TERM OF CONTRACT

Contracts under this tariff will be for not less than 1 year for residential or farm customers, not less than 3 years for commercial or industrial customers, or not less than 5 years for other customers. The Company reserves the right to include in the contract such other provisions as it may deem necessary to insure payment of bills throughout the term of the contract.

HOURS OF LIGHTING

All lamps shall burn from one-half hour after sunset until one-half hour before sunrise, every night and all night, or approximately 4,000 hours per annum.

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Docket Number 16-00001 <u>21-00107</u>

KINGSPORT POWER COMPANY

d/b/a AEP Appalachian Power Kingsport, Tennessee Original Sheet Number 17-3
T.P.U.C. Tariff Number 3

TARIFF S. L. (Street Lighting) (Continued)

OWNERSHIP OF FACILITIES

All facilities necessary for service including fixtures, controls, poles, transformers, secondaries, lamps and other appurtenances shall be owned and maintained by the Company. All service and necessary maintenance will be performed only during the regular scheduled working hours of the Company. Burned out lamps will normally be replaced within 48 hours after notification by the customer.

SPECIAL TERMS AND CONDITIONS

This tariff is subject to the Company's Terms and Conditions of Service.

CONVERSION CHARGE

Upon Customer request, the Company will convert an existing non-LED luminaire, currently billed in accordance with the Company's Schedule O.L., to an available LED luminaire upon payment, in advance, by the Customer to the Company of the applicable Conversion Charge.

The Conversion Charge for replacing an existing non-LED luminaire to a LED luminaire will be \$165.00.

In cases where the Company is requested to replace an existing mercury vapor lamp with a high pressure sodium or metal halide lamp, the right is reserved to charge the customer an amount commensurate with the cost involved.

SMART LIGHTING SERVICES

The light post and power together means other Smart Lighting devices could be attached to the light post at the same time as the upgrade to LED luminaires. Other devices could include environmental sensors, cameras, Wi-Fi network devices, smart parking and smart trash removal devices, speakers, signs etc. The installation of these devices at the same time as the street light upgrade may be more cost effective than adding these devices to the light post at a later date. If a customer desires to receive Smart Lighting services, the Company may provide a proposal to address individual customer needs. The customer agrees to execute a Service Agreement to contract with the Company for the pricing and terms of such Smart Lighting services.

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KINGSPORT POWER COMPANY d/b/a AEP Appalachian Power

Original Sheet Number 18-1 T.P.U.C. Tariff Number 3

Kingsport, Tennessee

TARIFF N.M.S. (Net Metering Service Rider)

AVAILABILITY OF SERVICE

Available for new or existing Customers who operate an eligible renewable fuel generator designed to operate in parallel with the Company's system and who request Net Metering Service (NMS) from the Company. NMS Customers must take service under Tariff R.S., Tariff M.G.S.-Secondary, or Tariff P.S. NMS is limited to those customers who do not utilize time-of-day energy charge provisions.

The total capacity of all NMS Customers shall be limited to 1% of the Company's Tennessee peak load forecast ("Renewable Generator Limit"), and shall be available to customers with eligible renewable fuel generators on a first come, first serve basis. Customer's may not take service under this tariff and simultaneously take service under any alternative co-generation agreement.

DEFINITIONS

The following terms shall solely be used to define the applicability of Schedule N.M.S.

"Billing Period Credit" means the quantity of electricity generated and fed back into the electric grid by the customer's renewable fuel generator in excess of the electricity supplied to the customer over the billing period.

"Excess Generation" means the amount of electricity generated by the renewable fuel generator in excess of the electricity consumed by the customer over the course of the net metering period.

"Net Metering Customer (Customer)" means a customer owning and operating, or contracting with other persons to own or operate, or both, a renewable fuel generator under a net metering service arrangement.

"Net Metering Service" means providing retail electric service to a customer operating a renewable fuel generator and measuring the difference, over the net metering period between electricity supplied to the customer from the electric grid and the electricity generated and fed back to the electric grid.

"Person" means any individual, corporation, partnership, association, company, business, trust, joint venture, or other private legal entity and the State or any municipality.

"RF Generator" is an electrical generating facility which complies with all of the following requirements:

- (a) has an alternating current capacity less than or equal to 10 KW for customers taking service under Schedule R.S. or 15kW for customers with proof of licensed electric vehicle which is either owned or leased by the customer;
- (b) uses solar, wind or hydro energy as its total fuel source;
- (c) the Net Metering Customer's facility is located on the customer's premises and is connected to the customer's wiring on customer's side of its interconnection with the distributor;
- (d) is designed and installed to operate in parallel with the Company's system without adversely affecting the operation of equipment and service of the Company and its customers and without presenting safety hazards to the Company and Customer personnel; and
- (e) is intended primarily to offset all or part of the customer's own electricity requirements.

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Pursuant to an Order in

Original Sheet Number 187-2 T.P.U.C.R.A. Tariff Number 32

TARIFF N.M.S. (Net Metering Service Rider)

CONDITIONS OF SERVICE

A. Notification

- 1. For a renewable fuel generator with an alternating current capacity of 25 KW or less, the customer shall submit the required Company Interconnection Notification Form to the Company at least thirty (30) days prior to the date the customer intends to interconnect the renewable fuel generator to the Company's facilities. For a renewable fuel generator with an alternating current capacity greater than 25 KW, the customer shall submit the required Interconnection Notification Form to the Company at least sixty (60) days prior to the date the customer intends to interconnect the renewable fuel generator to the Company's facilities. The submission may either be directly to the Company or by registered mail with return receipt. All sections, including appropriate signatures, of the Interconnection Notification Form must be completed for the notification to be valid. The customer shall have all equipment necessary to complete the interconnection prior to such notification. For renewable fuel generators with capacities greater than 25 KW, the customer should contact the Company prior to making financial commitments. If mailed, the date of notification shall be the third day following the mailing of the Interconnection Form. The Company shall provide a copy of the Interconnection Notification Form to the customer upon request
- 2. The Company shall, within thirty (30) days of the date of notification for RF Generators with a rated capacity of 25 KW or less, and within sixty (60) days of the date of notification for RF Generators with a rated capacity greater than 25 KW, either return to the customer a copy of the valid Interconnection Notification Form or return any incomplete form. If the Company determines that the Interconnection Notification Form is incomplete or that any of the other requirements for interconnection are not satisfied, the customer shall submit another completed Interconnection Notification Form and notify the Company once the customer has completed all work necessary to satisfy the deficiencies prior to interconnection. This notification requirement shall not replace or supersede any other applicable waiting period, or required interconnection authorization when other applicable law, rule, regulation or code would permit authorization to be withheld or delayed.
- 3. The Net Metering Customer shall immediately notify the electric distribution company of any changes in the ownership of, operational responsibility for, or contact information for the generator. The Net Metering Customer shall not assign this tariff or any part hereof without the prior written consent of the Company, and such authorized assignment may result in the termination of availability of tariff to Customer.

B. Conditions of Interconnection

- 1. RF Generator equipment shall be installed in accordance with the manufacturer's specifications as well as all applicable provisions of the National Electrical Code. Renewable fuel generator equipment and installations shall comply with all applicable safety and performance standards of the National Electrical Code, the Institute of Electrical and Electronic Engineers and accredited testing laboratories in accordance with IEEE Standard 1547, Standard for Interconnecting Distributed Resources with Electric Power Systems, July 2003, and safety and performance standards established by local and national electrical codes including, the institute of Electrical and Electronics Engineers, the National Electrical Safety Code, and Underwriters Laboratories. Customer's renewable fuel generator equipment and installations shall also comply with the Company's Interconnection Guidelines. The Company shall provide a copy of its Interconnection Guidelines to the customer upon request.
- 2. The Customer shall obtain any governmental authorizations and permits required for the construction and operation of the RF Generator facility and interconnection facilities.

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Original Sheet Number 187-3 T.R.A.T.P.U.C. Tariff Number 32

TARIFF N.M.S. (Net Metering Service Rider)

CONDITIONS OF SERVICE (Cont'd)

- 3. In the case of renewable fuel generators with an alternating current capacity greater than 25 KW, the following requirements shall be met before interconnection may occur:
 - a. <u>Electric Distribution Facilities and Customer Impact Limitations</u>. A renewable fuel generator shall not be permitted to interconnect to the Company's distribution facilities if the interconnection would reasonably lead to damage of any of the Company's facilities or would reasonably lead to voltage regulation or power quality problems at other customer revenue meters due to the incremental effect of the Company's electric distribution system, unless the customer reimburses the Company for its cost to modify any facilities needed to accommodate the interconnection.
 - b. <u>Secondary, Service and Service Entrance Limitations.</u> The capacity of the RF Generator shall be less than the capacity of the Company-owned secondary, service, and service entrance cable connected to the point of interconnection, unless the customer reimburses the Company for its cost to modify any facilities needed to accommodate the interconnection.
 - c. <u>Transformer Loading Limitations</u>. The RF Generator shall not have the ability to overload the Company's transformer, or any transformer winding, beyond manufacturer or nameplate ratings, unless the customer reimburses the Company for its costs to modify any facilities needed to accommodate the interconnection.
 - d. <u>Integration With Company Facilities Grounding.</u> The grounding scheme of the renewable fuel generator shall comply with IEEE 1547, Standard for Interconnecting Distributed Resources With Electric Power Systems, July 2003, and shall be consistent with the grounding scheme used by the Company. If requested by a prospective net metering customer, the Company shall assist the customer in selecting a grounding scheme the coordinates with the Company's distribution system.
 - e. <u>Balance Limitation</u>. The RF Generator shall not create a voltage imbalance of more than 3.0% at any other customer's revenue meter if the Company's transformer, with the secondary connected to the point of interconnection, is a three-phase transformer, unless the customer reimburses the Company for its cost to modify any facilities needed to accommodate the interconnection.
- 4. The customer shall provide a copy of its insurance policy to the Company. If the customer's renewable fuel generator does not exceed 10 KW, then such coverage shall be an amount of at least \$100,000 for the liability of the insured against loss arising out of the use of a generation facility. If the customer's renewable fuel generator exceeds 10 KW, then such coverage shall be an amount of at least \$300,000 for the liability of the insured against loss arising out of the use of a generation facility. The customer must submit evidence of such insurance to the Company with the Interconnection Notification Form.

The Company's receipt of evidence of liability insurance does not imply an endorsement of the terms and conditions of the coverage.

Neither party assumes any responsibility of any kind with respect to the construction, maintenance, or operation of the system or other property owned or used by the other party. The Customer agrees that the Company shall not be liable for any claims, costs, losses, suits or judgments for damages to any Person or property in any way resulting from, growing out of, or arising in or in connection with the use of, or contact with, energy delivered after it is delivered to Customer and while it is flowing through the lines of Customer, or is being distributed by Customer, or is being used by retail load.

5. Following Notification by the Customer, the Company shall have the right to inspect and test the RF Generator equipment and installation prior to interconnection. The nature and extent of these tests shall be determined solely by the Company. The Company reserves the right to conduct additional tests and inspections and to install additional equipment or meters at any time following interconnection of the RF Generator. The Customer shall not commence parallel operation of the RF Generator until the facility has been approved by the Company. Notwithstanding the foregoing, the Company's approval to operate the facility in parallel with the Company's system should not be construed as an endorsement, confirmation, warranty, guarantee, or representation concerning the safety, operating characteristics, durability of reliability of the RF Generator.

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Original Sheet Number 1<u>8</u>7-4 <u>T.P.U.C.T.R.A.</u> Tariff Number <u>3</u>2

TARIFF N.M.S. (Net Metering Service Rider)

- 6. The RF Generator installation must have a visibly open, lockable, manual disconnect switch which is accessible by the Company at all hours and clearly labeled. A licensed certified technician must certify via the Interconnection Notification Form that the disconnection switch has been installed properly. The Company reserves the right to install any additional equipment, including controls and meters, at the facility.
- 7. The Customer shall periodically maintain and test the RF Generator in accordance with the manufacturer's specifications and all applicable safety and performance standards. The Customer shall notify the Company at least fourteen (14) days prior to making any material changes to the renewable fuel generator facility or installation, including, but not necessarily limited to, any modification to the equipment or protective equipment settings or disconnection of the RF Generator from the Company's system, excluding temporary disconnects for routine maintenance. Modifications or changes made to the RF Generator shall be evaluated by the Company prior to being made. The Customer shall provide detailed information describing the modifications of changes to the Company in writing prior to making the modification the RF Generator. The Company shall review the proposed changes to the RF Generator and provide the results of its evaluation to the Customer within sixty (60) days of receipt of the Customer's proposal. Any items that would prevent parallel operation due to violation of applicable safety standards and/or power generation limits shall be explained along with a description of the modifications necessary to remedy violations. Following a notification of disconnection of the renewable fuel generator, the customer must again complete the Notification process specified above prior to any subsequent reconnection.

In addition, the customer shall notify the Company immediately regarding either any damage to the RF Generator facility or safety-related emergency disconnections.

- 8. The Company may enter the Customer's premises to inspect the Customer's protective devices and read or test the meter. The Company may disconnect the interconnection facilities without notice if the Company reasonably believes a hazardous condition exists and such immediate action is necessary to protect persons, or the Company's facilities, or property of others from damage or interference caused by the Customer's facilities.
- 9. Interconnection authorization is not transferable or assignable to other persons or service locations.

C. Other

- 1. The Company shall not be obligated to accept energy from the Customer and may require Customer to interrupt or reduce delivery of energy, when necessary, in order to construct, install, repair, replace, remove, investigate, or inspect any of the Company's equipment or part of its system; or if it reasonably determines that curtailment, interruption, or reduction is necessary because of emergencies, forced outage, force majeure, or compliance with prudent electrical practices. Whenever possible, the Company shall give the Customer reasonable notice of the possibility that interruption or reduction of deliveries may be required. Notwithstanding any other provision of this tariff, if at any time the Company reasonably determines that either the Renewable fuel generator facility may endanger the Company's personnel or other persons or property, or the continued operation of the RF Generator may endanger the integrity of safety of the Company's system, the Company shall reserve the right to disconnect and lock out the RF Generator from the Company's system. The RF Generator shall remain disconnected until such time as the Company is reasonably satisfied that the conditions referenced in this section have been satisfied.
- 2. To the fullest extent permitted by law, neither customer nor company, nor their respective officers, directors, agents, and employees members parents or affiliates, successors or assigns, or their respective officers directors, agents, nor employees successors or assigns shall be liable to the other party or their respective members, parents, subsidiaries, affiliates, officers, directors, agents employees successors or assigns, for claims, suits, actions or causes of action for incidental, indirect, special, punitive, multiple, or consequential damages connected with or resulting from performance or non-performance of such agreement, or any actions undertaken in connection with or related to this agreement, including without limitation, any such damages which are based upon causes of action for breach of contract, tort (including negligence and misrepresentation), breach of warranty, strict liability, statute, operation of law under any indemnity provision or any other theory of recovery. The obligor's liability shall be limited to direct damages only, and such direct damages shall be the sole and exclusive measure of damages and all other judicial remedies or damages are waived. The provisions of this section shall apply regardless of fault and shall survive termination, cancellation, suspension, completion or expiration of this agreement. Notwithstanding anything in this section to the contrary, any provisions of this section will not apply to the extent it is finally determined by a court of competent jurisdiction, including appellate review if pursued, to violate the laws of the Constitution of the State of Tennessee.

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TARIFF N.M.S. (Net Metering Service Rider)

FACILITIES CHARGES

The customer is responsible for all equipment and installation costs of the renewable fuel generator facility.

The Company shall inspect the inverter settings of a static inverter-connected renewable fuel generator prior to interconnection. The customer shall pay \$50 to the Company for each generator that requires inspection.

The Company shall inspect the protective equipment settings of a non-static inverter-connected renewable fuel generator prior to interconnection. The customer shall pay \$50 to the Company for each generator that requires inspection.

The customer shall pay to the Company any additional charges, as determined by the Company, for equipment, labor, metering, testing or inspections requested by the customer.

METERING

Net metered energy shall be measured in accordance with standard metering practices by metering equipment capable of measuring (but not necessarily displaying) power flow in both directions.

In instances where a Net Metering Customer has requested, and where the electric distribution company would not have otherwise installed, metering equipment, the Company may charge the Net Metering Customer its actual cost of installing any additional equipment necessary to implement Net Metering Service.

MONTHLY CHARGES

All monthly charges shall be in accordance with the Schedule under which the customer takes service. Such charges shall be based on the customer's net energy for the billing period, to the extent that the net energy exceeds zero. To the extent that a customer's net energy is zero or negative during the billing period, the customer shall pay only the non-usage sensitive charges of the Schedule. The customer shall receive no compensation from the Company for Excess Generation during the billing period. The Excess Generation during the billing period shall be carried forward and credited against positive energy usage in subsequent billing periods.

The Net Metering Period shall be defined as each successive 12-month period beginning with the first meter reading date following the date of interconnection of the RF Generator with the Company's facilities. Any Excess Generation at the end of a Net Metering Period shall be carried forward to the next Net Metering Period only to the extent that the Excess Generation does not exceed the customer's billed consumption for the current net metering period, adjusted to exclude accumulated billing credit carried forward and applied from the previous net metering Period.

Excess generation is not transferable, and the Customer, shall receive no compensation from the Company for any Excess generation upon termination of service from the Company.

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KgPCo Exhibit No. 3 Witness: WKC Page 57 of 75

		Page
KINGSPORT POWER COMPANY	Original Sheet Number 1 <u>9</u> 8-1	
d/b/a AEP Appalachian Power	T.R.A. Tariff Number 2	
Kingsport, Tennessee		
TARIFF RTODR (Regional Transmission Organization Demand Response Rider)		
AVAILABILITY OF SERVICE		
Non-residential customers may participate in any regional transmission organization (RTO) den	ama avaant aa anaaifiaally neavida	d harain
time party Curtainnent service Frovider (CSF), metuding an emergency, economic and anemary progra	ams, except as specifically provided	# HOTOHI.

PJM Interconnection, LLC (PJM) is the Company's RTO. Consistent with current RTO rules, customers may qualify to act as their own CSP. This Tariff shall apply to customers and CSPs that qualify for the RTO emergency (capacity) demand response program, and any successors to that program. This Tariff shall only apply during RTO delivery years for which the Fixed Resource Requirement (FRR) Alternative of the RTO Reliability Pricing Model (RPM) is applicable to the Company, RTO delivery years begin on June 1 and end on May 31. The Company shall notify

This Tariff is available for at least 35 MWs of emergency demand response from customers in the Company's Tennessee service territory that qualify for the RTO emergency demand response program, on a first nominated by March 1 of each year, first served basis. The Company reserves the right, but is not required, to purchase MWs of emergency demand response in excess of 35 MW. There is no limitation on the amount of demand response that can participate in economic, ancillary or other RTO demand response programs.

CONDITIONS OF SERVICE

- The Terms and Conditions of RTO demand response programs are subject to change, from time to time, as approved by the Federal Energy Regulatory Commission.
- The customer is ultimately responsible for compliance with the terms and conditions of the RTO demand response program and the terms of any contract(s) between the customer and a CSP.
- All notifications to customer regarding the demand response program will be directly from the RTO or CSP.

all registered CSPs within 5 business days of any change in the Company's status as part of the FRR Alternative.

- All charges, credits and payments to customer under the demand response program will be directly from the CSP.
- The customer or CSP shall provide advance notice to the Company of any test scheduled for purposes of compliance with the RTO demand program of which it has received advance notice.
- The customer must provide written authorization to the Company before any customer specific information will be released to a CSP.
- Upon request of the customer or CSP, the Company will provide interval and/or pulse metering. The Company will work with customers and CSPs to install interval and/or pulse metering in a timely fashion. The incremental cost of any such metering shall be borne by the customer or CSP, and will be based upon the Company's costs of such metering.
- CSP's must comply with all requirements of the RTO and have on file with the Tennessee Regulatory Authority a current CSP registration
- (9) NO RESPONSIBILITY OR LIABILITY OF ANY KIND SHALL ATTACH TO OR BE INCURRED BY THE COMPANY OR THE AEP SYSTEM FOR, OR ON ACCOUNT OF, ANY LOSS, COST, EXPENSE, OR DAMAGE CAUSED BY OR RESULTING FROM, EITHER DIRECTLY OR INDIRECTLY, ANY DEMAND RESPONSE UNDER THE PROVISIONS OF THIS TARIFF.

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Pursuant to an Order in

KgPCo Exhibit No. 3 Witness: WKC Page 58 of 75

	Wi Pa
_KINGSPORT POWER COMPANY	Original Sheet Number 18-2
d/b/a AEP Appalachian Power	T.R.A. Tariff Number 2
Kingsport, Tennessee	
TARIFF RTODR (Regional Transmission Organization Demand Response Rider)	

CSP CONTRACT FOR EMERGENCY DEMAND RESPONSE CAPACITY (Contract)

CSPs and customers acting as their own CSP that participate in an RTO emergency demand response program shall enter into a Contract with the Company. A CSP will have a single Contract with the Company for the aggregate emergency demand response capacity associated with customers of the Company. Such Contract will provide for the transfer/assignment of the nominated amount of RTO emergency demand response capacity to the Company so that the Company may use such capacity to meet its RTO FRR obligations. For purposes of this Tariff, an RTO emergency demand response program shall be any RTO demand response program that meets the RTO's requirements to be considered a capacity resource under the RTO Reliability Pricing Model. By January 15 of each year, such CSPs and customers acting as their own CSP shall provide a non-binding forecast of the amount of emergency demand response capacity expected to be provided for each of the following four (4) RTO delivery years. Such forecast shall be prepared on a good faith basis to be as accurate as reasonably possible to allow the Company to rely upon the projected resources to meet its FRR commitment and incorporate such capacity in its FRR capacity plan.

By March 1 of each year, such CSPs and customers acting as their own CSP shall nominate to the Company the amount of emergency demand response capacity to be provided for the upcoming June 1 through May 31 RTO delivery year.

COMPANY PAYMENT FOR EMERGENCY DEMAND RESPONSE CAPACITY

The Company will pay the CSPs and customers acting as their own CSP that participate in an RTO emergency demand response program for the amount of RTO emergency demand response capacity nominated to the Company as of March 1 for each upcoming delivery year, CSPs and customers acting as their own CSP shall, prior to the applicable RTO deadline, transfer/assign capacity to the Company's FRR obligation according to the RTO's requirements in an amount not less than the amount nominated as of March 1. Payments will be made monthly and shall be calculated as the product of the MWs of capacity transferred/assigned, the Company's Weighted Daily Revenue Rate, and the number of days in the month.

The Weighted Daily Revenue Rate shall be the average rate in \$\text{MW-day for all cleared MW, weighted by the megawatts cleared at each clearing price. Cleared MW shall include all cleared sell offers in the applicable Locational Delivery Area from each RPM auction (Base Residual Auction, First Incremental Auction, Second Incremental Auction and Third Incremental Auction) for the relevant PJM delivery year.

Any non-compliance charges, deficiency charges (should the amount of capacity registered with the RTO by the CSP or customers acting as their own CSP, be less than the amount nominated as of March 1), test failure charges or other charges assessed to the Company by the RTO related to the capacity transferred/assigned by a CSP to the Company shall be the responsibility of that particular CSP or customer acting as its own CSP. For billing and payment purposes, the Company may net any such charges against payments due to such CSP or customer under this Tariff.

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Pursuant to an Order in

KgPCo Exhibit No. 3 Witness: WKC Page 59 of 75

KINGSPORT POWER COMPANY d/b/a AEP Appalachian Power Original Sheet Number 18-3

T.R.A. Tariff Number 2

Kingsport, Tennessee

TARIFF RTODR

(Regional Transmission Organization Demand Response Rider)

SPECIAL TERMS AND CONDITIONS

Participation in the RTO Emergency Demand Response Program in order to satisfy any commitments by customers or CSPs on behalf of customers in existence as of November 21, 2012, that provided for the sale of emergency demand response capacity in the RTO RPM auction for delivery years ending no later than May 31, 2016, shall be allowed, in lieu of use of the emergency demand response capacity to meet the Company's FRR obligations.

Customer specific information shall remain confidential unless specified in writing by the customer. Customers and CSPs agree to work with the Company to provide any information related to service under this Tariff necessary to satisfy any RTO or regulatory requirements.

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KINGSPORT POWER COMPANY d/b/a AEP Appalachian Power Number 32 Kingsport, Tennessee Original Sheet Number 19 <u>T.P.U.C.T.R.A.</u> Tariff

RESERVED FOR FUTURE USE

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KINGSPORT POWER COMPANY	Original Sheet Number 20
d/b/a AEP Appalachian Power	T.R.A. Tariff Number 2
Kingsport, Tennessee	
STORM DAMAGE RIDER	

1. Surcharge

Pursuant to the provisions of this Rider, a Storm Damage Rider surcharge will be applied to each kilowatt hour, kilowatt or lamp as billed under the Company's filed tariffs.

The Storm Damage Rider surcharge applicable to each tariff is set below:

Tariff	Energy Rate	Demand Rate	Lamp Rate
	(¢) / KWH	(\$) /- KW	(\$) / Lamp
		_	_
RS	_		
	<u> </u>	_	_
SGS			
		_	_
MGS	-		
		_	_
EHG	_		
CC		_	_
CS			
DC		_	_
PS			
LCC			_
LGS		-	
IP PRI		_	_
IP TRANS			
H IN/HVO	_	_	_
	_	_	
OL			_

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KgPCo Exhibit No. 3 Witness: WKC Page 62 of 75

KINGSPORT POWER COMPANY Number 21-1 d/b/a AEP Appalachian Power Kingsport, Tennessee <u>Third RevisedOriginal</u> Sheet

T.P.U.C. Tariff Number 32

TRP & MS RIDER

In accordance with Tennessee Code Annotated § 65-5-103 (d) (2) (A) (ii) and (iii), Kingsport Power is authorized under the terms of this rider to apply a charge to all customer bills on a service rendered basis to recover actually incurred TRP & MS (Targeted Reliability Plan & Major Storm) Rider costs.

1. Calculation of Targeted Reliability Program and Major Storm Rider Recovery

At least annually the Company will file information regarding actual Targeted Reliability Plan (TRP) costs and Major Storm (MS) expenses. The annual change in the Company's TRP & MS Rider recovery amount shall be calculated according to the following formula:

TRP & MSa-TRP & MSr

Where

TRP & MSa is the Company's Targeted Reliability Plan and Major Storm actual costs incurred by the Company for the period. The costs will be net of the reliability expenses and major storm expenses approved in the Company's most recent base case (an annual amount of \$1,295,7534,534,693). In developing the Targeted Reliability Plan return on capital, the Company will use the most recent base case authorized rate of return.

TRP & MSr is the actual revenues received as a result of TRP & MS Rider rates in effect for the same period.

2. Updates to TRP & MS Rider Costs

TRP & MS Rider rates shall remain in effect until such time as new TRP & MS Rider rates are approved by the Tennessee Public Utility Commission.

3. Determination of Adjustments to Surcharges by Tariff

The Company will adjust the level of revenue recovery (positive or negative) under the TRP & MS Rider by the amount of the Calculation described in Section 1 and any remaining prior period over/under recovery balance. Prior period over/under recovery balances result from differences between the Company's actual costs as calculated in Section 1 and actual billing under the Rider in prior reporting periods. The Company will allocate the revenue requirement to the individual tariff class by application of the revenue allocation factors used in the Company's most recent base case, and will use the appropriate billing determinants, as determined in the Company's most recent base case, to develop the TRP & MS Rider tariff charges.

4. Notification of Change in Charge by the Company

The Company will provide no less than a 30-day notice of the proposed effective date in any change in the Rider charge to its customers. The Company will also provide the calculations and other information supporting the Rider charges to the Staff of the Tennessee Public Utility Commission in advance of the effective date of such charge.

Issued: July 13, 2021 Effective: July 1, 2022 August 15, 2021

By: Christian T. Beam, President Pursuant to an Order in

Docket Number 20 001271-00107

T.P.U.C. Tariff Number 32

TRP & MS RIDER

5. Charge

Pursuant to the provisions of this Rider, a TRP & MS Rider charge will be applied to each account under the Company's filed tariffs.

The TRP & MS Rider charge applicable to each tariff is set below:

<u>Tariff</u>	Energy Rate	Demand Rate	Customer Rate
	(¢) / kWh	(\$) / KW or *KVA	(\$)/Customer
Residential			\$ <u>0.00</u> 4 .84
Residential Employee			\$ <u>0.00</u> 4.84
Residential Smart Time-of-Use			<u>\$0.00</u>
Residential Time-of-Day			\$ <u>0.00</u> 4.84
Small General Service (SGS)			\$ <u>0.00</u> 6.10
Medium General Service (MGS) Secondary		\$ <u>0.00</u> 2.85	
General Service Time-of-Day (GS-TOD)	0. <u>0000</u> 27811		
Medium General Service (MGS) Primary		\$ <u>0.00</u> 2.75	
Large General Service (LGS) Secondary*		\$ <u>0.00</u> 3.08	
Large General Service (LGS) Primary*		\$ <u>0.00</u> 2.39	
LGS Subtransmission/Transmission*		\$ <u>0.00</u> 2.34	
Industrial Power (IP) Secondary		\$ <u>0.00</u> 1.12	
Industrial Power (IP) Primary		\$ <u>0.00</u> 1.09	
Industrial Power (IP) Subtransmission/Transmission		\$ <u>0.00</u> 1 <u>.03</u>	
Church Service	<u>0.0000</u> 1.06862		
Public Schools (PS)	0. <u>0000</u> 85979		
Electric Heating General (EHG)**		\$ <u>0.00</u> 2.84	
Outdoor Lighting (OL)- (per Lamp)			\$ <u>0.00</u> 1.25
Street Lighting (SL) – (per Lamp)			<u>\$0.00</u>

^{**}Demand is measured in accordance with tariff.

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KINGSPORT POWER COMPANY d/b/a AEP Appalachian Power Number 32
Kingsport, Tennessee

Original Sheet Number 22-1 T.P.U.C.T.R.A. Tariff

TARIFF S.B.S. (Standby Service)

MONTHLY CHARGES FOR STANDBY SERVICE

Supplemental Service

The customer shall contract for a specific amount of supplemental contract capacity according to the provisions of the applicable firm service Standard Tariff (hereinafter referred to as supplemental tariff). Any demand or energy not identified as backup or maintenance service shall be considered supplemental service and billed according to the applicable Standard Schedule.

Backup Service

1. <u>Determination of Backup Contract Capacity</u>

The backup contract capacity in kilowatts (kW) shall be initially established by mutual agreement between the customer and the Company for electrical capacity sufficient to meet the maximum backup requirements which the Company is expected to supply.

The customer shall specify the desired backup contract capacity to the nearest 50 kW as well as the desired service reliability as specified under the Monthly Backup Charge. Changes in the backup contract capacity are subject to the provisions set forth in the Term of Contract.

2. Backup Service Notification Requirement

Whenever backup service is needed, the customer shall verbally notify the Company within one (1) hour. Such notification shall be confirmed in writing within five (5) working days and shall specify the time and date such use commenced and termination date. If such notification is not received, the customer shall be subject to an increase in contract capacity in accordance with the provisions of the Standard Schedule under which the customer receives supplemental service and such backup demand shall be considered supplemental demand and billed accordingly.

3. Backup Demand Determination

Whenever backup service is supplied to the customer for use during forced outages, the customer's integrated kW demand shall be adjusted by subtracting the amount of backup contract capacity supplied by the Company. In no event shall the adjusted demand be less than zero (0). The monthly billing demand under the supplemental service schedule shall be the maximum adjusted integrated demand. If both backup and maintenance service are utilized during the same billing period, the customer's integrated demands will be adjusted for both in the appropriate period. Whenever the customer's maximum integrated demand at any time during the billing period exceeds the total of the supplemental service contract capacity and the specific request for backup and/or maintenance service, the excess demand shall be considered as supplemental demand in the determination of the billing demands under the appropriate supplemental service schedule.

4. Backup Service Energy Determination

Whenever backup service is utilized, backup energy shall be billed under the appropriate supplemental tariff.

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Original Sheet Number 22-2 T.P.U.C.T.R.A. Tariff

TARIFF S.B.S. (Standby Service)

MONTHLY CHARGES FOR STANDBY SERVICE (Cont'd)

5. Monthly Back-up Charge

Each kilowatt of demand billed is subject to all applicable riders.

	% Forced	Maximum	Demand
	Outage	Outage	Charge
Service Voltage	Rate	Hours	\$/KW
Service Reliability Level A	5	438	
Service Reliability Level B	10	876	
Service Reliability Level C	15	1,314	
Service Reliability Level D	20	1,752	
Service Reliability Level E	25	2,190	
Service Reliability Level F	30	2,628	
Secondary			<u>13.18</u> 3.70
Primary		_	2.46 <u>8.14</u>
Subtransmission/Transmission			0.00

The total monthly backup charge is equal to the selected monthly backup demand charge times the backup contract capacity. Whenever the allowed outage hours for the respective reliability level selected by the customer are exceeded during the contract year, the customer's unadjusted integrated demands shall be used for billing purposes under the appropriate supplemental tariff for the remainder of the contract year.

Maintenance Service

1. Determination of Maintenance Contract Capacity

The customer may contract for maintenance service by giving at least six (6) months' advance written request as specified in the Term of Contract. Such notice shall specify the amount to the nearest fifty (50) kW not to exceed the customer's maximum maintenance service requirements during planned maintenance outages, and the effective date for the amount of contracted maintenance service.

2. Maintenance Service Notification Requirement

A major maintenance outage shall be considered as any maintenance service request greater than 5,000 kW and may be scheduled at a time consented to by the Company. Written notice shall be provided by the customer at least 180 days in advance of such scheduled outages or a lesser period by mutual agreement and shall specify the kW amount of maintenance service required, as well as the dates and times such use will commence and terminate. A major maintenance service request shall not exceed the kW capacity of the customer's power production facilities as listed in the customer's service contract.

A minor maintenance outage shall be considered as any maintenance service request of 5,000 kW or less and may be scheduled at a time consented to by the Company. Written notice shall be provided by the customer at least thirty (30) days in advance of such outage or a lesser period by mutual agreement.

If such notification is not received, the customer shall be subject to an increase in supplemental service contract capacity according to the provisions of the supplemental service schedule under which the customer is served and such maintenance service demand shall be considered as supplemental load in the determination of the billing demands.

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TARIFF S.B.S. (Standby Service)

MONTHLY CHARGES FOR STANDBY SERVICE (Cont'd)

3. <u>Major Maintenance Service Limitation</u>

The customer shall be limited to one major maintenance outage of 30-days duration for each generator listed in the customer's service contract in each contract year. Additional major maintenance outages or outages exceeding 30-days duration may be requested by the customer and shall be subject to approval by the Company. At the time in which any such additional or prolonged maintenance occurs, the customer shall provide to the Company notarized verification that energy provided under this provision is for maintenance use only.

4. <u>Maintenance Service Demand Determination</u>

Whenever a specific request for maintenance service is made by the customer, the customer's integrated demands will be adjusted by subtracting the maintenance service requested in the hours specified by the customer. The monthly billing demands under the supplemental service schedule shall be the maximum adjusted integrated demands.

If both backup and maintenance service are utilized during the same billing period, the customer's integrated demands will be adjusted for both in the appropriate hours. In no event shall the adjusted demand be less than zero (0).

Whenever the maximum integrated demand at any time during the billing period exceeds the total of the supplemental contract capacity and the specific request for maintenance and/or back-up service, the excess demand shall be considered as supplemental load in the determination of the billing demands.

5. Maintenance Service Energy Determination

Whenever maintenance service is used, maintenance energy shall be calculated as the lesser of a) the kW of maintenance service requested multiplied by the number of hours of maintenance use or b) total metered energy. Metered energy for purposes of billing under the appropriate supplemental service schedule shall be derived by subtracting the maintenance energy from the total metered energy for the billing period.

6. Monthly Maintenance Service Charge

In addition to the monthly charges established under the supplemental service schedule, the customer shall pay the Company for maintenance energy as follows:

For each kWh of maintenance energy taken:

Service Voltage	Energy Charge ¢/kWh
Secondary	<u>2.122</u> 0.596
Primary	<u>1.311</u> 0.396
Subtransmission/Transmission	0.000

Each kilowatt-hour of energy consumed is subject to all applicable riders.

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KINGSPORT POWER COMPANY d/b/a AEP Appalachian Power Number 32
Kingsport, Tennessee

Original Sheet Number 22-4 T.P.U.C.T.R.A. Tariff

TARIFF S.B.S. (Standby Service)

MONTHLY CHARGES FOR STANDBY SERVICE (Cont'd)

Local Facilities Charge

Charges to cover interconnection costs (including but not limited to suitable meters, relays and protective apparatus) incurred by the Company shall be determined by the Company and shall be collected from the customer. Such charges shall include the total installed cost of all local facilities. In addition, the customer shall reimburse the Company for all state and federal income taxes associated with such charges. The customer shall make a one-time payment for the Local Facilities Charge at the time of the installation of the required additional facilities, or, at his option, up to thirty-six (36) consecutive equal monthly payments reflecting an annual interest charge as determined by the Company, but not to exceed the cost of the Company's most recent issue of long-term debt. If the customer elects the installment payment option, the Company may require a reasonable security deposit. This provision applies also to customers with Standby Contract capacities less than 100kW.

FUEL AND PURCHASED POWER ADJUSTMENT-RIDERS

Monthly charges computed under this tariff shall be adjusted in accordance with the applicable Commission-approved riders as contained herein.

All bills for service according to the rates set forth herein will include charges under the Fuel and Purchased Power Adjustment Rider.

PROMPT PAYMENT DISCOUNT

A discount of 1.5 percent will be allowed if account is paid in full within 15 days of date of bill.

SPECIAL PROVISION FOR CUSTOMERS WITH STANDBY CONTRACT CAPACITIES OF LESS THAN 100 kW

Customers requesting standby service (backup and/or maintenance) with contract capacities of less than 100 kW shall execute a special contract form for a minimum of one (1) year. Contract standby capacity in kilowatts shall be set equal to the capacity of the customer's largest power production facility.

TERM

Contracts under this Schedule will be made for an initial period of not less than one (1) year and shall continue thereafter until either party has given six (6) months' written notice to the other of the intention to terminate the contract. The Company will have the right to make contracts for initial periods longer than one (1) year.

A 6-months' advance written request is required for any change in supplemental, backup, or maintenance service requirements, except for the initial standby service contract. All changes in the standby service contract shall be effective on the contract anniversary date. The Company shall either concur in writing or inform the customer of any conditions or limitations associated with the customer's request within sixty (60) days.

SPECIAL TERMS AND CONDITIONS

At its discretion, the Company may require that Company-owned metering be installed to monitor the customer's generation.

The Company reserves the right to inspect the customer's relays and protective equipment at all reasonable times.

Customers taking service under this Standard Schedule who desire to transfer to firm full requirements will be required to give the Company written notice of at least thirty-six (36) months. The Company reserves the right to reduce the notice period requirement dependent upon individual circumstances.

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KINGSPORT POWER COMPANY d/b/a AEP Appalachian Power Number 32 Kingsport, Tennessee

Original Sheet Number 23-1 T.P.U.C.T.R.A. Tariff

RIDER A.F.S. (Alternate Feed Service)

AVAILABILITY OF SERVICE

Standard Alternate Feed Service (AFS) is a premium service providing a redundant distribution service provided through a redundant distribution line and distribution station transformer, with automatic or manual switch-over and recovery, which provides increased reliability for distribution service. Rider AFS applies to those customers requesting new or upgraded AFS after December 31, 2016, or existing AFS customers that desire to maintain redundant service when the Company must make expenditures after December 31, 2016, in order to continue providing such service.

Rider AFS is available to customers who request a primary voltage alternate feed and who normally take service under Tariffs M.G.S., L.G.S., and I.P. for their basic service requirements, provided that the Company has adequate capacity in existing distribution facilities, as determined by the Company, or if changes can be made to make capacity available. AFS provided under this rider may not be available at all times, including emergency situations.

SYSTEM IMPACT STUDY CHARGE

The Company shall charge the customer for the actual cost incurred by the Company to conduct a system impact study for each site reviewed. The study will consist of, but is not limited to, the following: (1) identification of customer load requirements, (2) identification of the potential facilities needed to provide the AFS, (3) determination of the impact of AFS loading on all electrical facilities under review, (4) evaluation of the impact of the AFS on system protection and coordination issues including the review of the transfer switch, (5) evaluation of the impact of the AFS request on system reliability indices and power quality, (6) development of cost estimates for any required system improvements or enhancements required by the AFS, and (7) documentation of the results of the study. The Company will provide to the customer an estimate of charges for this study.

EQUIPMENT AND INSTALLATION CHARGE

The customer shall pay, in advance of construction, a nonrefundable amount for all equipment and installation costs for all dedicated and/or local facilities provided by the Company required to furnish either a new or upgraded AFS. The payment shall be grossed-up for federal and state income taxes, assessment fees and utility receipts taxes. The customer will not acquire any title in said facilities by reason of such payment. The equipment and installation charge shall be determined by the Company and shall include, but not be limited to, the following: (1) all costs associated with the AFS dedicated and/or local facilities provided by the Company, and (2) any costs or modifications to the customer's basic service facilities.

The customer is responsible for all costs associated with providing and maintaining phone service for use with metering to notify the Company of a transfer of service to the AFS or return to basic service.

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KgPCo Exhibit No. 3 Witness: WKC Page 69 of 75

KINGSPORT POWER COMPANY d/b/a AEP Appalachian Power Number 32 Kingsport, Tennessee Original Sheet Number 23-2 T.P.U.C.T.R.A. Tariff

RIDER A.F.S. (Alternate Feed Service)

TRANSFER SWITCH PROVISIONS

In the event the customer receives basic service at primary voltage, the customer shall install, own, maintain, test, inspect, operate and replace the transfer switch. Customer-owned switches are required to be at primary voltage and must meet the Company's engineering, operational and maintenance specifications. The Company reserves the right to inspect the customer-owned switches periodically and to disconnect the AFS for adverse impacts on reliability or safety.

Existing AFS customers, who receive basic service at primary voltage and are served via a Company-owned transfer switch and control module, may elect for the Company to continue ownership of the transfer switch. When the Company-owned transfer switch and/or control module requires replacement, and the customer desires to continue the AFS, the customer shall pay the Company the total cost to replace such equipment which shall be grossed up for federal and state income taxes, assessment fees and utility receipts taxes. In addition, the customer shall pay a monthly rate of \$14.69 for the Company to annually test the transfer switch / control module and the customer shall reimburse the Company for the actual costs involved in maintaining the Company-owned transfer switch and control module.

In the event a customer receives basic service at secondary voltage and requests AFS, the Company will provide the AFS at primary voltage. The Company will install, own, maintain, test, inspect and operate the transfer switch and control module. The customer shall pay the Company a nonrefundable amount for all costs associated with the transfer switch installation. The payment shall be grossed-up for federal and state income taxes, assessment fees and utility receipts taxes. In addition, the customer is required to pay the monthly rate for testing and ongoing maintenance costs defined above. When the Company-owned transfer switch and/or control module requires replacement, and the customer desires to continue the AFS, customer shall pay the Company the total cost to replace such equipment which shall be grossed up for federal and state income taxes, assessment fees and utility receipts taxes.

After a transfer of service to the AFS, a customer utilizing a manual or semi-automatic transfer switch shall return to the basic service within one (1) week or as mutually agreed to by the Company and customer. In the event system constraints require a transfer to be expedited, the Company will endeavor to provide as much advance notice as possible to the customer. However, the customer shall accomplish the transfer back to the basic service within ten minutes if notified by the Company of system constraints. In the event the customer fails to return to basic service within 12 hours, or as mutually agreed to by the Company and customer, or within ten minutes of notification of system constraints, the Company reserves the right to immediately disconnect the customer's load from the AFS source. If the customer does not return to the basic service as agreed to, or as requested by the Company, the Company may also provide 30 days' notice to terminate the AFS agreement with the customer.

The customer shall make a request to the Company for approval three days in advance for any planned switching.

MONTHLY AFS CAPACITY RESERVATION DEMAND CHARGE

Monthly AFS charges will be in addition to all monthly basic service charges paid by the customer under the applicable tariff.

The Monthly AFS Capacity Reservation Demand Charge for the reservation of distribution station and primary lines is 2.70-46 per kW/kVA.

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KINGSPORT POWER COMPANY d/b/a AEP Appalachian Power Number 32 Kingsport, Tennessee

Original Sheet Number 23-3 T.P.U.C.T.R.A. Tariff

RIDER A.F.S. (Alternate Feed Service)

AFS CAPACITY RESERVATION

The customer shall reserve a specific amount of AFS capacity equal to, or less than, the customer's normal maximum requirements, but in no event shall the customer's AFS capacity reservation under this rider exceed the capacity reservation for the customer's basic service under the appropriate tariff. The Company shall not be required to supply AFS capacity in excess of that reserved except by mutual agreement.

If the customer plans to increase the AFS demand at anytime in the future, the customer shall promptly notify the Company of such additional demand requirements. The customer's AFS capacity reservation and billing will be adjusted accordingly. The customer will pay the Company the actual costs of any and all additional dedicated and/or local facilities required to provide AFS in advance of construction and pursuant to an AFS construction agreement. If customer exceeds the agreed upon AFS capacity reservation, the Company reserves the right to disconnect the AFS. If the customer's AFS metered demand exceeds the agreed upon AFS capacity reservation, which jeopardizes company facilities or the electrical service to other customers, the Company reserves the right to disconnect the AFS immediately. If the Company agrees to allow the customer to continue AFS, the customer will be required to sign a new AFS agreement reflecting the new AFS capacity reservation. In addition, the customer will promptly notify the Company regarding any reduction in the AFS capacity reservation.

The customer may reserve partial-load AFS capacity, which shall be less than the customer's full requirements for basic service subject to the conditions in this provision. Prior to the customer receiving partial-load AFS capacity, the customer shall be required to demonstrate or provide evidence to the Company that they have installed demand-controlling equipment that is capable of curtailing load when a switch has been made from the basic service to the AFS. The Company reserves the right to test and verify the customer's ability to curtail load to meet the agreed upon partial-load AFS capacity reservation.

DETERMINATION OF BILLING DEMAND

Full-Load Requirement:

For customers requesting AFS equal to their load requirement for basic service, the AFS billing demand shall be taken each month as the single-highest 15-minute or 30-minute integrated peak as registered during the month by a demand meter or indicator, but the monthly AFS billing demand so established shall in no event be less than the greater of (a) the customer's AFS capacity reservation, or (b) the customer's highest previously established monthly billing demand on the AFS during the past 11 months, or (c) the customer's basic service capacity reservation, or (d) the customer's highest previously established monthly billing demand on the basic service during the past 11 months

Partial-Load Requirement:

For customer's requesting partial-load AFS capacity reservation that is less than the customer's full requirements for basic service, the AFS billing demand shall be taken each month as the single-highest 15-minute integrated peak on the AFS as registered during the month by a demand meter or indicator, but the monthly AFS billing demand so established shall in no event be less than the greater of (a) the customer's AFS capacity reservation, or (b) the customer's highest previously established monthly metered demand on the partial-load AFS during the past 11 months.

PROMPT PAYMENT DISCOUNT

A discount of 1.5 percent will be allowed if account is paid in full within 15 days of date of bill.

KINGSPORT POWER COMPANY

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T.P.U.C.T.R.A. Tariff

RIDER A.F.S. (Alternate Feed Service)

TERM OF CONTRACT

The AFS agreement under this rider will be made for a period of not less than one year and shall remain in effect thereafter until either party shall give at least six months' written notice to the other of the intention to discontinue service under the terms of this rider.

Disconnection of AFS under this rider due to reliability or safety concerns associated with customer-owned transfer switches will not relieve the customer of payments required hereunder for the duration of the agreement term.

SPECIAL TERMS AND CONDITIONS

This rider is subject to the Company's Terms and Conditions of Service.

Upon receipt of a request from the customer for non-standard AFS (AFS which includes unique service characteristics different from standard AFS), the Company will provide the customer with a written estimate of all costs, including system impact study costs, and any applicable unique terms and conditions of service related to the provision of the non-standard AFS. An AFS agreement will be filed with the Commission under the 30-day filing procedures. The AFS agreement shall provide full disclosure of all rates, terms and conditions of service under this rider, and any and all agreements related thereto.

The Company will have sole responsibility for determining the basic service circuit and the AFS circuit.

The Company assumes no liability should the AFS circuit, transfer switch, or other equipment required to provide AFS fail to operate as designed, is unsatisfactory, or is not available for any reason.

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KINGSPORT POWER COMPANY
d/b/a AEP Appalachian Power
Kingsport, Tennessee
T.P.U.C. Tariff Number 3

TARIFF P.E.V (Residential Plug-In Electric Vehicle Charging)

AVAILABILITY OF SERVICE

Available for Tariff RS (Residential Service) customers who use using charging stations for Plug-In Electric Vehicles (PEV) programmed to consume electrical energy primarily during off-peak hours specified by the Company, who currently have a standard meter. The PEV must be a licensed electric motor vehicle which is subject to state inspection, and which is either owned or leased by the Customer.

PROGRAM DESCRIPTION

PEVs eligible to be served under this Tariff shall be metered through one single-phase, multi-register meter capable of measuring electrical energy consumption during on-peak and off-peak billing periods. Metering that is capable of separately identifying PEV usage shall be installed at the Company's discretion. Total Residential Service usage will be billed at the Customers Tariff RS Monthly Rates. A credit will be applied to the Customer's bill for all off-peak PEV kWh usage measured at the submeter and billed under Tariff Code (059). There is no billing adjustment for PEV on-peak usage.

CONDITIONS OF SERVICE

The supply of electricity to such charging system must be via a dedicated hard-wired circuit, single-phase, at not more than 240 volts, nor more than 100 amperes. The customer may be required to provide documentation, such as current vehicle registration, that demonstrates possession of the PEV to take service under this Tariff.

MONTHLY RATE (Tariff Code 059)

_Each kilowatt-hour of energy consumed is subject to all applicable Standard Service riders and surcharges.

For the purpose of this Tariff, the on-peak billing period is defined as 6 a.m. to 8 p.m., local time, for all weekdays, Monday through Friday. The off-peak billing period is defined as 8 p.m. to 6 a.m., local time, for all weekdays, all hours of the day on Saturdays and Sundays, and the legally observed holidays of New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

TERM

Customers who opt to take service under this Tariff are required to enter into a written service agreement which may require periodic documentation of continued operation of a qualifying PEV. Should the Customer discontinue operating the qualifying PEV, the Customer will notify the Company so that arrangements can be made to remove PEV metering and terminate service under this Tariff.

SPECIAL TERMS AND CONDITIONS

This tariff is subject to the Company's Terms and Conditions of Service.

The Company reserves the right to inspect at all reasonable times the vehicle charging devices which qualify the residence for service under this Tariff. If the Company finds that in its sole judgement the availability conditions of this tariff are being violated, it may discontinue billing the customer under this Tariff and commence billing under the appropriate Residential Service Tariff.

Issued: By: Christian T. Beam, President Effective: July 1, 2022
Pursuant to an Order in
Docket Number 21-00107XXX

KINGSPORT POWER COMPANY
d/b/a AEP Appalachian Power

Kingsport, Tennessee

Original Sheet Number 25-1 T.P.U.C. Tariff Number 3

OPTIONAL RIDER E.D.R. (Economic Development Rider)

AVAILABILITY OF SERVICE

<u>In order to encourage economic development in the Company's service area, limited-term reductions in billing demands described herein are offered to qualifying new and existing retail Customers who make application for service under this Rider.</u>

Service under this Rider is intended for specific types of commercial and industrial Customers whose operations, by their nature, will promote sustained economic development based on plant and facilities investment and job creation. Availability is limited to Customers on a first-come, first-served basis for Customer load additions totaling up to 50 MW in aggregate. This Rider is available to commercial and industrial Customers who are or would be served under Tariff M.G.S., L.G.S. and I.P. who meet the following requirements:

- (1) A new Customer must have a billing demand of 500 kW or more, or at least 500 kVA for Tariff L.G.S. An existing Customer must increase billing demand by 500 kW or more, or at least 500 kVA for Tariff L.G.S., over the maximum billing demand during the 24 months prior to the date of the application by the Customer for service under this Rider (Base Maximum Billing Demand) at the same Customer location. The Base Billing Demand for a new Customer shall be 0 kW.
- (2) A new Customer, or the expansion by an existing Customer, must result in the creation of at least ten (10) full-time equivalent (FTE) jobs maintained over the contract term, or a capital investment at the service location in excess of two million five hundred thousand dollars (\$2,500,000). Company reserves the right to verify job counts. Failure to demonstrate the creation of new employment positions and to maintain the employment during the contract term or the required capital investment, will result in the termination of the contract or agreement addendum for service under this Rider.
- (3) The Customer must demonstrate to the Company's satisfaction that, absent the availability of this Rider, the qualifying new or increased demand would be located outside of the Company's service territory or would not be placed in service due to poor operating economics.

TERMS AND CONDITIONS

- (1) To receive service under this Rider, the Customer shall make written application to the Company with sufficient information contained therein to determine the Customer's eligibility for service.
- (2) For new Customers, billing demands for which deductions will be applicable under this Rider shall be for service at a new service location and not merely the result of a change of ownership. Relocation of the delivery point of the Company's service, moving existing equipment from another AEP-served location or load transfers from another AEP-served location do not qualify as a new service location.
- (3) For existing Customers, billing demands for which deductions will be applicable under this Rider shall be the result of an increase in business activity and not merely the result of resumption of normal operations following a force majeure, strike, equipment failure, renovation or refurbishment, or other such abnormal operating condition. In the event that such an occurrence has taken place during the 24-month period prior to the date of the application by the Customer for service under this Rider, the monthly billing demands during the 24-month period shall be adjusted as appropriate to eliminate the effects of such occurrence.
- (4) All demand adjustments offered under this Rider shall be applicable for a maximum of five years.
- (5) The existing local facilities of the Company must be deemed adequate, in the judgment of the Company, to supply the new or expanded electrical capacity requirements of the Customer. If construction of new or expanded local facilities by the Company is required; the Customer may be required to make a contribution-in-aid of construction for the installed cost of such facilities pursuant to the provisions of the Company's Terms and Conditions of Service.

Issued: By: Christian T. Beam, President Effective: <u>July 1, 2022</u> Pursuant to an Order in Docket Number 21-00<u>107</u>

KINGSPORT POWER	COMPANY
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d/b/a AEP Appalachian Power Kingsport, Tennessee Original Sheet Number 25-2 T.P.U.C. Tariff Number 3

OPTIONAL RIDER E.D.R. (Economic Development Rider) (continued)

(continued)
DETERMINATION OF MONTHLY ADJUSTED BILLING DEMAND
The Qualifying Incremental Billing Demand shall be determined as the amount by which the billing demand, as determined according to the Customer's Standard Schedule. for the current billing period without this Rider, exceeds the Base Maximum Billing Demand. Such incremental billing demand shall be considered to be zero, however, unless it is at least 500 kW, or at least 500 kVA for Tariff L.G.S., for new Customers or existing Customers.
The monthly adjusted billing demand under this Rider shall be the billing demand as determined according to the Customer's Tariff for the current billing period without this Rider less the product of the Qualifying Incremental Billing Demand and the applicable Adjustment Factor.
No Adjustment Factors shall be applied to any portion of minimum billing demands as calculated under the Customer's Tariff.
DETERMINATION OF ADJUSTMENT FACTOR
Customers meeting all availability and terms and conditions above shall contract for service for a period of five (5) years with an Adjustment Factor of forty percent (40%). The adjustment factor shall be applicable over a period of 60 consecutive billing months beginning with the first such month following the end of the start-up period. The start-up period shall commence with the effective date of the contract addendum for service under this Rider and shall terminate by mutual agreement between the Company and the Customer.
In no event shall the start-up period exceed 12 months.
TERMS OF CONTRACT
A contract or agreement addendum for service under this Rider, in addition to service under Tariff M.G.S., L.G.S., and I.P., shall be executed by the Customer and the Company for the time period which includes the start-up period and the adjustment factor period immediately following the end of the start-up period. The contract addendum shall specify the Base Maximum Billing Demand, the anticipated total demand, the Adjustment Factor and related provisions to be applicable under this Rider, and the effective date for the contract addendum. The Customer may discontinue service under this Rider before the end of the contract or agreement addendum only by reimbursing the
Company for any demand adjustments received under this Rider billed at the applicable rate.
SPECIAL TERMS AND CONDITIONS
Except as otherwise provided in this Rider, written agreements shall remain subject to all of the provisions of the applicable tariff. This Rider is subject to the Company's Terms and Conditions of Service.

Issued: By: Christian T. Beam, President Effective: <u>July 1, 2022</u> Pursuant to an Order in Docket Number 21-00<u>107</u>

KINGSPO	RT POWER	COMPANY
d/h/a AEP	Annalachian	Power

<u>d/b/a AEP Appalachian Power</u> Kingsport, Tennessee Original Sheet Number 26 T.P.U.C. Tariff Number 3

OPTIONAL RIDER R.E.C. (Renewable Energy Choice Rider)

AVAILABILITY OF SERVICE

Available to customers taking service under the Company's metered rate schedules. The Company will purchase and retire Renewable Energy Certificates (RECs) on behalf of participating customers under Option A. The Company will seek to purchase the lowest cost RECs available on behalf of customers. The Company reserves the right to evaluate the market value of RECs annually and adjust the rate to reflect prevailing costs.

Customers who wish to directly purchase the electrical output and all associated environmental attributes from a renewable energy generator may contract bilaterally with the Company under Option B. Option B is available to customers taking metered service under the Company's I.P. or L.G.S. tariffs, or multiple P.S., G.S.-T.O.D. or M.G.S. tariff accounts with common ownership under a single parent company that can aggregate multiple accounts to exceed 1000 kW of peak demand.

CONDITIONS OF SERVICE

Customers who wish to support the development of electricity generated by Renewable Resources may under Option A contract to purchase each month a specific number of fixed kWh blocks, or choose to cover all of their monthly usage. All REC's purchased under Option A of this tariff shall be retained or retired by the Company on behalf of customers.

MONTHLY RATES

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In addition to the monthly charges determined according to the Company's rate schedule under which the customer takes service, the customer shall participate in the Renewable Energy Credit Rider under one of the following options:

Block Purchase Option: \$5.35 for each 500 kWh block nominated
All Usage Purchase Option: \$0.0107/kWh consumed

The Monthly Rate for Renewable Energy (MRRE) is calculated as follows:

$\underline{\mathsf{MRRE}} = \mathsf{CR} + \mathsf{CSS}$

Where

CR = \$0.0060 per kWh/\$3.00 per 500 kWh block, the cost of procuring Renewable Energy derived from Renewable Energy Certificates ("RECs"). A REC is a tradable instrument that is equal to one megawatt hour of electricity or equivalent energy supplied by a renewable energy facility.

And

CSS = \$0.0047 per kWh/\$2.35 per 500 kWh block, the cost of Support Services. "Support Services", includes but is not limited to customer enrollment, customer service center support, reporting functions, marketing and customer education.

Customers participating under Option A may terminate service under this Rider by notifying the Company with at least thirty (30) days prior notice.

Option B

Charges for service under option B of this Tariff will be set forth in the written agreement between the Company and the Customer and will reflect a combination of the firm service rates otherwise available to the Customer and the cost of the renewable energy resource being directly contracted for by the Customer.

Under Option B, the term of the agreement will be determined in the written agreement between the Company and the Customer.

SPECIAL TERMS AND CONDITIONS

This Rider is subject to the Company's Standard Terms and Conditions of Service and all provisions of the rate schedule under which the customer takes service, including all payment provisions. The Company may deny or terminate service under this Rider to customers who are delinquent in payment to the Company.

Issued:

By: Christian T. Beam, President

Effective: <u>July 1, 2022</u> Pursuant to an Order in Docket Number 21-00<u>107</u>



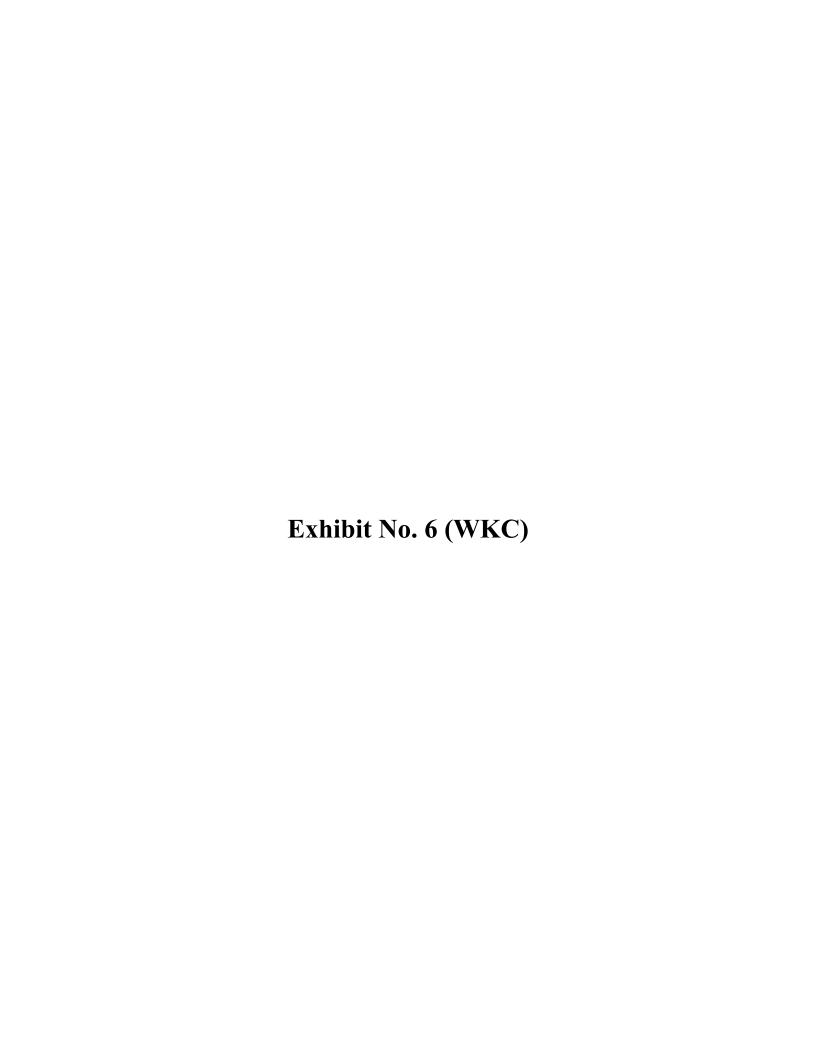
Peer Group Determination

			Value	Value		No Major	Peer
		Moody's	Line	Line	Dividend	Sale or	Group
		Credit	Safety	Financial	Policy/	Merger	Criteria
Ticker	Company	Rating	Rating	Strength	Payment	Activity	Met
ALE	ALLETE, Inc.	✓	✓	\checkmark	√	√	\checkmark
LNT	Alliant Energy Corporation	✓	√	\checkmark	√	\checkmark	\checkmark
AEE	Ameren Corporation	✓	\checkmark	\checkmark	✓	✓	\checkmark
AEP	American Electric Power	✓	√	\checkmark	✓	✓	\checkmark
AVA	Avista Corporation	✓	✓	✓	✓	✓	✓
BKH	Black Hills Corporation	✓	✓	✓	✓	✓	✓
CMS	CMS Energy Corporation	√	√	✓	✓	✓	✓
ED	Consolidated Edison, Inc.	√	✓	✓	✓	✓	✓
D	Dominion Energy, Inc.	✓	✓	✓	✓	✓	✓
DUK	Duke Energy Corporation	✓	✓	✓	✓	✓	✓
ETR	Entergy Corporation	√	√	✓	✓	✓	✓
EVRG	Evergy, Inc.	√	✓	✓	✓	✓	✓
ES	Eversource Energy	√	✓	✓	✓	✓	✓
IDA	IDACORP, Inc.	√	✓	✓	✓	✓	√
NEE	NextEra Energy, Inc.	✓	\checkmark	\checkmark	√	✓	\checkmark
NEW	NorthWestern Corporation	✓	✓	✓	✓	✓	✓
OGE	OGE Energy Corp.	√	✓	✓	✓	√	✓
OTTR	Otter Tail Corporation	✓	\checkmark	\checkmark	✓	✓	\checkmark
PNW	Pinnacle West Capital	✓	\checkmark	\checkmark	✓	✓	\checkmark
PEG	Public Svc Enterpirse Group	✓	✓	✓	✓	✓	✓
SRE	Sempra Energy	√	✓	✓	✓	√	✓
SO	Southern Company	✓	✓	✓	✓	✓	✓
WEC	WEC Energy Group	✓	✓	\checkmark	✓	✓	\checkmark
XEL	Xcel Energy Inc.	√	✓	✓	✓	✓	✓
AGR	AVANGRID Inc.					Х	Х
DTE	DTE Energy Corp					Х	Х
EXC	Exelon Corporation					Х	Х
FE	First Energy Corp.	Х	Х				Х
CNP	CenterPoint Energy Inc.		Х	Х			X



Peer Group Value Line Betas

			Peer
			Group
Company	VL Beta	Market Cap (\$M)	Weight
ALLETE, Inc.	0.90	3,590	0.5%
Alliant Energy Corporation	0.85	14,825	2.0%
Ameren Corporation	0.85	22,103	3.0%
American Electric Power	0.75	44,156	6.0%
Avista Corporation	0.10	2,992	0.4%
Black Hills Corporation	1.00	4,419	0.6%
CMS Energy Corporation	0.80	18,303	2.5%
Consolidated Edison, Inc.	0.75	26,447	3.6%
Dominion Energy, Inc.	0.85	61,841	8.4%
Duke Energy Corporation	0.90	79,899	10.8%
Entergy Corporation	0.95	21,890	3.0%
Evergy, Inc.	0.95	15,080	2.0%
Eversource Energy	0.90	29,905	4.0%
IDACORP, Inc.	0.85	5,258	0.7%
NextEra Energy, Inc.	0.95	158,005	21.4%
NorthWestern Corporation	0.95	3,197	0.4%
OGE Energy Corp.	1.05	6,926	0.9%
Otter Tail Corporation	0.90	2,184	0.3%
Pinnacle West Capital	0.95	9,035	1.2%
Public Svc Enterpirse Group	0.95	31,472	4.3%
Sempra Energy	1.00	42,672	5.8%
Southern Company	0.95	68,873	9.3%
WEC Energy Group	0.80	29,648	4.0%
Xcel Energy Inc.	0.80	36,670	5.0%
Peer Group Weighted Average	0.89		100.0%
Peer Group Median	0.90		



CAPM - Median Equity Return - Current 30 day T-Bill Yield

Equal Div. Weighted Risk-Free CAPM Proj. Risk Relative Company Yield Growth Equity Rate Premium Beta Result Weight ALLETE, Inc. 1.81% 9.50% 11.31% 0.04% 11.27% 0.90 10.18% 0.49% **Alliant Energy Corporation** 1.81% 9.50% 11.31% 0.04% 11.27% 0.85 9.62% 2.00% Ameren Corporation 1.81% 9.50% 11.31% 2.99% 0.04% 11.27% 0.85 9.62% American Electric Power 1.81% 9.50% 11.31% 8.49% 5.97% 0.04% 11.27% 0.75 **Avista Corporation** 1.81% 9.50% 11.31% 0.04% 11.27% 0.10 1.11% 0.40% **Black Hills Corporation** 1.81% 9.50% 11.31% 0.04% 11.27% 1.00 11.31% 0.60% **CMS Energy Corporation** 1.81% 9.50% 11.31% 0.04% 11.27% 0.80 9.06% 2.48% Consolidated Edison, Inc. 1.81% 9.50% 11.31% 0.04% 11.27% 0.75 8.49% 3.58% Dominion Energy, Inc. 1.81% 9.50% 11.31% 0.04% 11.27% 0.85 9.62% 8.36% 1.81% 9.50% 11.31% 0.04% 11.27% 0.90 10.18% 10.81% **Duke Energy Corporation** 1.81% 9.50% 11.31% 0.04% 11.27% 0.95 10.75% 2.96% **Entergy Corporation** 2.04% Evergy, Inc. 1.81% 9.50% 11.31% 0.04% 11.27% 0.95 10.75% 1.81% 9.50% 11.31% 0.04% 11.27% 0.90 10.18% 4.04% **Eversource Energy** IDACORP, Inc. 1.81% 9.50% 11.31% 0.04% 11.27% 0.85 9.62% 0.71% 9.50% 11.27% 10.75% 21.37% NextEra Energy, Inc. 1.81% 11.31% 0.04% 0.95 NorthWestern Corporation 1.81% 9.50% 0.04% 11.27% 10.75% 0.43% 11.31% 0.95 OGE Energy Corp. 9.50% 0.94% 1.81% 11.31% 0.04% 11.27% 1.05 11.87% 0.30% Otter Tail Corporation 1.81% 9.50% 11.31% 0.04% 11.27% 0.90 10.18% 1.22% Pinnacle West Capital 1.81% 9.50% 11.31% 0.04% 11.27% 0.95 10.75% Public Svc Enterpirse Group 1.81% 9.50% 11.31% 0.04% 11.27% 0.95 10.75% 4.26% Sempra Energy 1.81% 9.50% 11.31% 0.04% 11.27% 1.00 11.31% 5.77% Southern Company 1.81% 9.50% 11.31% 0.04% 11.27% 0.95 10.75% 9.31% WEC Energy Group 1.81% 9.50% 11.31% 0.04% 11.27% 0.80 9.06% 4.01% Xcel Energy Inc. 1.81% 9.50% 11.31% 0.04% 11.27% 0.80 9.06% 4.96% Peer Group Weighted Average 1.81% 9.50% 11.31% 0.04% 11.27% 0.89 10.10% 100.00%

11.31%

Peer Group Median

1.81%

9.50%

11.27%

0.90

10.18%

0.04%

CAPM - Median Equity Return - Projected 30 day T-Bill Yield

			Equal					
	Div.	Proj.	Weighted	Risk-Free	Risk		CAPM	Relative
Company	Yield	Growth	Equity	Rate	Premium	Beta	Result	Weight
ALLETE, Inc.	1.81%	9.50%	11.31%	0.13%	11.18%	0.90	10.19%	0.49%
Alliant Energy Corporation	1.81%	9.50%	11.31%	0.13%	11.18%	0.85	9.63%	2.00%
Ameren Corporation	1.81%	9.50%	11.31%	0.13%	11.18%	0.85	9.63%	2.99%
American Electric Power	1.81%	9.50%	11.31%	0.13%	11.18%	0.75	8.52%	5.97%
Avista Corporation	1.81%	9.50%	11.31%	0.13%	11.18%	0.10	1.20%	0.40%
Black Hills Corporation	1.81%	9.50%	11.31%	0.13%	11.18%	1.00	11.31%	0.60%
CMS Energy Corporation	1.81%	9.50%	11.31%	0.13%	11.18%	0.80	9.07%	2.48%
Consolidated Edison, Inc.	1.81%	9.50%	11.31%	0.13%	11.18%	0.75	8.52%	3.58%
Dominion Energy, Inc.	1.81%	9.50%	11.31%	0.13%	11.18%	0.85	9.63%	8.36%
Duke Energy Corporation	1.81%	9.50%	11.31%	0.13%	11.18%	0.90	10.19%	10.81%
Entergy Corporation	1.81%	9.50%	11.31%	0.13%	11.18%	0.95	10.75%	2.96%
Evergy, Inc.	1.81%	9.50%	11.31%	0.13%	11.18%	0.95	10.75%	2.04%
Eversource Energy	1.81%	9.50%	11.31%	0.13%	11.18%	0.90	10.19%	4.04%
IDACORP, Inc.	1.81%	9.50%	11.31%	0.13%	11.18%	0.85	9.63%	0.71%
NextEra Energy, Inc.	1.81%	9.50%	11.31%	0.13%	11.18%	0.95	10.75%	21.37%
NorthWestern Corporation	1.81%	9.50%	11.31%	0.13%	11.18%	0.95	10.75%	0.43%
OGE Energy Corp.	1.81%	9.50%	11.31%	0.13%	11.18%	1.05	11.87%	0.94%
Otter Tail Corporation	1.81%	9.50%	11.31%	0.13%	11.18%	0.90	10.19%	0.30%
Pinnacle West Capital	1.81%	9.50%	11.31%	0.13%	11.18%	0.95	10.75%	1.22%
Public Svc Enterpirse Group	1.81%	9.50%	11.31%	0.13%	11.18%	0.95	10.75%	4.26%
Sempra Energy	1.81%	9.50%	11.31%	0.13%	11.18%	1.00	11.31%	5.77%
Southern Company	1.81%	9.50%	11.31%	0.13%	11.18%	0.95	10.75%	9.31%
WEC Energy Group	1.81%	9.50%	11.31%	0.13%	11.18%	0.80	9.07%	4.01%
Xcel Energy Inc.	1.81%	9.50%	11.31%	0.13%	11.18%	0.80	9.07%	4.96%
Peer Group Weighted Average	1.81%	9.50%	11.31%	0.13%	11.18%	0.89	10.11%	100.00%
Peer Group Median	1.81%	9.50%	11.31%	0.13%	11.18%	0.90	10.19%	

CAPM - Median Equity Return - Current 30 Year T-Bond Yield

Faual

	Div.	Proj.	Weighted	Risk-Free	Risk		CAPM	Relative
Company	Yield	Growth	Equity	Rate	Premium	Beta	Result	Weighting
ALLETE, Inc.	1.81%	9.50%	11.31%	1.93%	9.38%	0.90	10.37%	0.49%
Alliant Energy Corporation	1.81%	9.50%	11.31%	1.93%	9.38%	0.85	9.90%	2.00%
Ameren Corporation	1.81%	9.50%	11.31%	1.93%	9.38%	0.85	9.90%	2.99%
American Electric Power	1.81%	9.50%	11.31%	1.93%	9.38%	0.75	8.96%	5.97%
Avista Corporation	1.81%	9.50%	11.31%	1.93%	9.38%	0.10	2.82%	0.40%
Black Hills Corporation	1.81%	9.50%	11.31%	1.93%	9.38%	1.00	11.31%	0.60%
CMS Energy Corporation	1.81%	9.50%	11.31%	1.93%	9.38%	0.80	9.43%	2.48%
Consolidated Edison, Inc.	1.81%	9.50%	11.31%	1.93%	9.38%	0.75	8.96%	3.58%
Dominion Energy, Inc.	1.81%	9.50%	11.31%	1.93%	9.38%	0.85	9.90%	8.36%
Duke Energy Corporation	1.81%	9.50%	11.31%	1.93%	9.38%	0.90	10.37%	10.81%
Entergy Corporation	1.81%	9.50%	11.31%	1.93%	9.38%	0.95	10.84%	2.96%
Evergy, Inc.	1.81%	9.50%	11.31%	1.93%	9.38%	0.95	10.84%	2.04%
Eversource Energy	1.81%	9.50%	11.31%	1.93%	9.38%	0.90	10.37%	4.04%
IDACORP, Inc.	1.81%	9.50%	11.31%	1.93%	9.38%	0.85	9.90%	0.71%
NextEra Energy, Inc.	1.81%	9.50%	11.31%	1.93%	9.38%	0.95	10.84%	21.37%
NorthWestern Corporation	1.81%	9.50%	11.31%	1.93%	9.38%	0.95	10.84%	0.43%
OGE Energy Corp.	1.81%	9.50%	11.31%	1.93%	9.38%	1.05	11.78%	0.94%
Otter Tail Corporation	1.81%	9.50%	11.31%	1.93%	9.38%	0.90	10.37%	0.30%
Pinnacle West Capital	1.81%	9.50%	11.31%	1.93%	9.38%	0.95	10.84%	1.22%
Public Svc Enterpirse Group	1.81%	9.50%	11.31%	1.93%	9.38%	0.95	10.84%	4.26%
Sempra Energy	1.81%	9.50%	11.31%	1.93%	9.38%	1.00	11.31%	5.77%
Southern Company	1.81%	9.50%	11.31%	1.93%	9.38%	0.95	10.84%	9.31%
WEC Energy Group	1.81%	9.50%	11.31%	1.93%	9.38%	0.80	9.43%	4.01%
Xcel Energy Inc.	1.81%	9.50%	11.31%	1.93%	9.38%	0.80	9.43%	4.96%
Peer Group Weighted Average	1.81%	9.50%	11.31%	1.93%	9.38%	0.89	10.30%	100.00%
Peer Group Median	1.81%	9.50%	11.31%	1.93%	9.38%	0.90	10.37%	

CAPM - Median Equity Return - Projected 30 Year T-Bond Yield

			Equal					
	Div.	Proj.	Weighted	Risk-Free	Risk		CAPM	Relative
Company	Yield	Growth	Equity	Rate	Premium	Beta	Result	Weighting
ALLETE, Inc.	1.81%	9.50%	11.31%	2.37%	8.94%	0.90	10.42%	0.49%
Alliant Energy Corporation	1.81%	9.50%	11.31%	2.37%	8.94%	0.85	9.97%	2.00%
Ameren Corporation	1.81%	9.50%	11.31%	2.37%	8.94%	0.85	9.97%	2.99%
American Electric Power	1.81%	9.50%	11.31%	2.37%	8.94%	0.75	9.07%	5.97%
Avista Corporation	1.81%	9.50%	11.31%	2.37%	8.94%	0.10	3.22%	0.40%
Black Hills Corporation	1.81%	9.50%	11.31%	2.37%	8.94%	1.00	11.31%	0.60%
CMS Energy Corporation	1.81%	9.50%	11.31%	2.37%	8.94%	0.80	9.52%	2.48%
Consolidated Edison, Inc.	1.81%	9.50%	11.31%	2.37%	8.94%	0.75	9.07%	3.58%
Dominion Energy, Inc.	1.81%	9.50%	11.31%	2.37%	8.94%	0.85	9.97%	8.36%
Duke Energy Corporation	1.81%	9.50%	11.31%	2.37%	8.94%	0.90	10.42%	10.81%
Entergy Corporation	1.81%	9.50%	11.31%	2.37%	8.94%	0.95	10.86%	2.96%
Evergy, Inc.	1.81%	9.50%	11.31%	2.37%	8.94%	0.95	10.86%	2.04%
Eversource Energy	1.81%	9.50%	11.31%	2.37%	8.94%	0.90	10.42%	4.04%
IDACORP, Inc.	1.81%	9.50%	11.31%	2.37%	8.94%	0.85	9.97%	0.71%
NextEra Energy, Inc.	1.81%	9.50%	11.31%	2.37%	8.94%	0.95	10.86%	21.37%
NorthWestern Corporation	1.81%	9.50%	11.31%	2.37%	8.94%	0.95	10.86%	0.43%
OGE Energy Corp.	1.81%	9.50%	11.31%	2.37%	8.94%	1.05	11.76%	0.94%
Otter Tail Corporation	1.81%	9.50%	11.31%	2.37%	8.94%	0.90	10.42%	0.30%
Pinnacle West Capital	1.81%	9.50%	11.31%	2.37%	8.94%	0.95	10.86%	1.22%
Public Svc Enterpirse Group	1.81%	9.50%	11.31%	2.37%	8.94%	0.95	10.86%	4.26%
Sempra Energy	1.81%	9.50%	11.31%	2.37%	8.94%	1.00	11.31%	5.77%
Southern Company	1.81%	9.50%	11.31%	2.37%	8.94%	0.95	10.86%	9.31%
WEC Energy Group	1.81%	9.50%	11.31%	2.37%	8.94%	0.80	9.52%	4.01%
Xcel Energy Inc.	1.81%	9.50%	11.31%	2.37%	8.94%	0.80	9.52%	4.96%
Peer Group Weighted Average	1.81%	9.50%	11.31%	2.37%	8.94%	0.89	10.35%	100.00%
Peer Group Median	1.81%	9.50%	11.31%	2.37%	8.94%	0.90	10.42%	

CAPM - Market Weighted Equity Return - Current 30 Day T-Bill Yield

			Market					
	Div.	Proj.	Weighted	Risk-Free	Risk		CAPM	Relative
Company	Yield	Growth	Equity	Rate	Premium	Beta	Result	Weight
ALLETE, Inc.	2.10%	10.81%	12.91%	0.04%	12.87%	0.90	11.62%	0.49%
Alliant Energy Corporation	2.10%	10.81%	12.91%	0.04%	12.87%	0.85	10.98%	2.00%
Ameren Corporation	2.10%	10.81%	12.91%	0.04%	12.87%	0.85	10.98%	2.99%
American Electric Power	2.10%	10.81%	12.91%	0.04%	12.87%	0.75	9.69%	5.97%
Avista Corporation	2.10%	10.81%	12.91%	0.04%	12.87%	0.10	1.26%	0.40%
Black Hills Corporation	2.10%	10.81%	12.91%	0.04%	12.87%	1.00	12.91%	0.60%
CMS Energy Corporation	2.10%	10.81%	12.91%	0.04%	12.87%	0.80	10.34%	2.48%
Consolidated Edison, Inc.	2.10%	10.81%	12.91%	0.04%	12.87%	0.75	9.69%	3.58%
Dominion Energy, Inc.	2.10%	10.81%	12.91%	0.04%	12.87%	0.85	10.98%	8.36%
Duke Energy Corporation	2.10%	10.81%	12.91%	0.04%	12.87%	0.90	11.62%	10.81%
Entergy Corporation	2.10%	10.81%	12.91%	0.04%	12.87%	0.95	12.27%	2.96%
Evergy, Inc.	2.10%	10.81%	12.91%	0.04%	12.87%	0.95	12.27%	2.04%
Eversource Energy	2.10%	10.81%	12.91%	0.04%	12.87%	0.90	11.62%	4.04%
IDACORP, Inc.	2.10%	10.81%	12.91%	0.04%	12.87%	0.85	10.98%	0.71%
NextEra Energy, Inc.	2.10%	10.81%	12.91%	0.04%	12.87%	0.95	12.27%	21.37%
NorthWestern Corporation	2.10%	10.81%	12.91%	0.04%	12.87%	0.95	12.27%	0.43%
OGE Energy Corp.	2.10%	10.81%	12.91%	0.04%	12.87%	1.05	13.55%	0.94%
Otter Tail Corporation	2.10%	10.81%	12.91%	0.04%	12.87%	0.90	11.62%	0.30%
Pinnacle West Capital	2.10%	10.81%	12.91%	0.04%	12.87%	0.95	12.27%	1.22%
Public Svc Enterpirse Group	2.10%	10.81%	12.91%	0.04%	12.87%	0.95	12.27%	4.26%
Sempra Energy	2.10%	10.81%	12.91%	0.04%	12.87%	1.00	12.91%	5.77%
Southern Company	2.10%	10.81%	12.91%	0.04%	12.87%	0.95	12.27%	9.31%
WEC Energy Group	2.10%	10.81%	12.91%	0.04%	12.87%	0.80	10.34%	4.01%
Xcel Energy Inc.	2.10%	10.81%	12.91%	0.04%	12.87%	0.80	10.34%	4.96%
Peer Group Weighted Average	2.10%	10.81%	12.91%	0.04%	12.87%	0.89	11.53%	100.00%
Peer Group Median	2.10%	10.81%	12.91%	0.04%	12.87%	0.90	11.62%	

			Market					
	Div.	Proj.	Weighted	Risk-Free	Risk		CAPM	Relative
Company	Yield	Growth	Equity	Rate	Premium	Beta	Result	Weight
ALLETE, Inc.	2.10%	10.81%	12.91%	0.13%	12.78%	0.90	11.63%	0.49%
Alliant Energy Corporation	2.10%	10.81%	12.91%	0.13%	12.78%	0.85	10.99%	2.00%
Ameren Corporation	2.10%	10.81%	12.91%	0.13%	12.78%	0.85	10.99%	2.99%
American Electric Power	2.10%	10.81%	12.91%	0.13%	12.78%	0.75	9.72%	5.97%
Avista Corporation	2.10%	10.81%	12.91%	0.13%	12.78%	0.10	1.35%	0.40%
Black Hills Corporation	2.10%	10.81%	12.91%	0.13%	12.78%	1.00	12.91%	0.60%
CMS Energy Corporation	2.10%	10.81%	12.91%	0.13%	12.78%	0.80	10.35%	2.48%
Consolidated Edison, Inc.	2.10%	10.81%	12.91%	0.13%	12.78%	0.75	9.72%	3.58%
Dominion Energy, Inc.	2.10%	10.81%	12.91%	0.13%	12.78%	0.85	10.99%	8.36%
Duke Energy Corporation	2.10%	10.81%	12.91%	0.13%	12.78%	0.90	11.63%	10.81%
Entergy Corporation	2.10%	10.81%	12.91%	0.13%	12.78%	0.95	12.27%	2.96%
Evergy, Inc.	2.10%	10.81%	12.91%	0.13%	12.78%	0.95	12.27%	2.04%
Eversource Energy	2.10%	10.81%	12.91%	0.13%	12.78%	0.90	11.63%	4.04%
IDACORP, Inc.	2.10%	10.81%	12.91%	0.13%	12.78%	0.85	10.99%	0.71%
NextEra Energy, Inc.	2.10%	10.81%	12.91%	0.13%	12.78%	0.95	12.27%	21.37%
NorthWestern Corporation	2.10%	10.81%	12.91%	0.13%	12.78%	0.95	12.27%	0.43%
OGE Energy Corp.	2.10%	10.81%	12.91%	0.13%	12.78%	1.05	13.55%	0.94%
Otter Tail Corporation	2.10%	10.81%	12.91%	0.13%	12.78%	0.90	11.63%	0.30%
Pinnacle West Capital	2.10%	10.81%	12.91%	0.13%	12.78%	0.95	12.27%	1.22%
Public Svc Enterpirse Group	2.10%	10.81%	12.91%	0.13%	12.78%	0.95	12.27%	4.26%
Sempra Energy	2.10%	10.81%	12.91%	0.13%	12.78%	1.00	12.91%	5.77%
Southern Company	2.10%	10.81%	12.91%	0.13%	12.78%	0.95	12.27%	9.31%
WEC Energy Group	2.10%	10.81%	12.91%	0.13%	12.78%	0.80	10.35%	4.01%
Xcel Energy Inc.	2.10%	10.81%	12.91%	0.13%	12.78%	0.80	10.35%	4.96%
Peer Group Weighted Average	2.10%	10.81%	12.91%	0.13%	12.78%	0.89	11.54%	100.00%
Peer Group Median	2.10%	10.81%	12.91%	0.13%	12.78%	0.90	11.63%	

			Market					
	Div.	Proj.	Weighted	Risk-Free	Risk		CAPM	Relative
Company	Yield	Growth	Equity	Rate	Premium	Beta	Result	Weighting
ALLETE, Inc.	2.10%	10.81%	12.91%	1.93%	10.98%	0.90	11.81%	0.49%
Alliant Energy Corporation	2.10%	10.81%	12.91%	1.93%	10.98%	0.85	11.26%	2.00%
Ameren Corporation	2.10%	10.81%	12.91%	1.93%	10.98%	0.85	11.26%	2.99%
American Electric Power	2.10%	10.81%	12.91%	1.93%	10.98%	0.75	10.16%	5.97%
Avista Corporation	2.10%	10.81%	12.91%	1.93%	10.98%	0.10	2.97%	0.40%
Black Hills Corporation	2.10%	10.81%	12.91%	1.93%	10.98%	1.00	12.91%	0.60%
CMS Energy Corporation	2.10%	10.81%	12.91%	1.93%	10.98%	0.80	10.71%	2.48%
Consolidated Edison, Inc.	2.10%	10.81%	12.91%	1.93%	10.98%	0.75	10.16%	3.58%
Dominion Energy, Inc.	2.10%	10.81%	12.91%	1.93%	10.98%	0.85	11.26%	8.36%
Duke Energy Corporation	2.10%	10.81%	12.91%	1.93%	10.98%	0.90	11.81%	10.81%
Entergy Corporation	2.10%	10.81%	12.91%	1.93%	10.98%	0.95	12.36%	2.96%
Evergy, Inc.	2.10%	10.81%	12.91%	1.93%	10.98%	0.95	12.36%	2.04%
Eversource Energy	2.10%	10.81%	12.91%	1.93%	10.98%	0.90	11.81%	4.04%
IDACORP, Inc.	2.10%	10.81%	12.91%	1.93%	10.98%	0.85	11.26%	0.71%
NextEra Energy, Inc.	2.10%	10.81%	12.91%	1.93%	10.98%	0.95	12.36%	21.37%
NorthWestern Corporation	2.10%	10.81%	12.91%	1.93%	10.98%	0.95	12.36%	0.43%
OGE Energy Corp.	2.10%	10.81%	12.91%	1.93%	10.98%	1.05	13.46%	0.94%
Otter Tail Corporation	2.10%	10.81%	12.91%	1.93%	10.98%	0.90	11.81%	0.30%
Pinnacle West Capital	2.10%	10.81%	12.91%	1.93%	10.98%	0.95	12.36%	1.22%
Public Svc Enterpirse Group	2.10%	10.81%	12.91%	1.93%	10.98%	0.95	12.36%	4.26%
Sempra Energy	2.10%	10.81%	12.91%	1.93%	10.98%	1.00	12.91%	5.77%
Southern Company	2.10%	10.81%	12.91%	1.93%	10.98%	0.95	12.36%	9.31%
WEC Energy Group	2.10%	10.81%	12.91%	1.93%	10.98%	0.80	10.71%	4.01%
Xcel Energy Inc.	2.10%	10.81%	12.91%	1.93%	10.98%	0.80	10.71%	4.96%
Peer Group Weighted Average	2.10%	10.81%	12.91%	1.93%	10.98%	0.89	11.73%	100.00%
Peer Group Median	2.10%	10.81%	12.91%	1.93%	10.98%	0.90	11.81%	

			Market					
	Div.	Proj.	Weighted	Risk-Free	Risk		CAPM	Relative
Company	Yield	Growth	Equity	Rate	Premium	Beta	Result	Weight
ALLETE, Inc.	2.10%	10.81%	12.91%	2.37%	10.54%	0.90	11.85%	0.49%
Alliant Energy Corporation	2.10%	10.81%	12.91%	2.37%	10.54%	0.85	11.33%	2.00%
Ameren Corporation	2.10%	10.81%	12.91%	2.37%	10.54%	0.85	11.33%	2.99%
American Electric Power	2.10%	10.81%	12.91%	2.37%	10.54%	0.75	10.27%	5.97%
Avista Corporation	2.10%	10.81%	12.91%	2.37%	10.54%	0.10	3.37%	0.40%
Black Hills Corporation	2.10%	10.81%	12.91%	2.37%	10.54%	1.00	12.91%	0.60%
CMS Energy Corporation	2.10%	10.81%	12.91%	2.37%	10.54%	0.80	10.80%	2.48%
Consolidated Edison, Inc.	2.10%	10.81%	12.91%	2.37%	10.54%	0.75	10.27%	3.58%
Dominion Energy, Inc.	2.10%	10.81%	12.91%	2.37%	10.54%	0.85	11.33%	8.36%
Duke Energy Corporation	2.10%	10.81%	12.91%	2.37%	10.54%	0.90	11.85%	10.81%
Entergy Corporation	2.10%	10.81%	12.91%	2.37%	10.54%	0.95	12.38%	2.96%
Evergy, Inc.	2.10%	10.81%	12.91%	2.37%	10.54%	0.95	12.38%	2.04%
Eversource Energy	2.10%	10.81%	12.91%	2.37%	10.54%	0.90	11.85%	4.04%
IDACORP, Inc.	2.10%	10.81%	12.91%	2.37%	10.54%	0.85	11.33%	0.71%
NextEra Energy, Inc.	2.10%	10.81%	12.91%	2.37%	10.54%	0.95	12.38%	21.37%
NorthWestern Corporation	2.10%	10.81%	12.91%	2.37%	10.54%	0.95	12.38%	0.43%
OGE Energy Corp.	2.10%	10.81%	12.91%	2.37%	10.54%	1.05	13.44%	0.94%
Otter Tail Corporation	2.10%	10.81%	12.91%	2.37%	10.54%	0.90	11.85%	0.30%
Pinnacle West Capital	2.10%	10.81%	12.91%	2.37%	10.54%	0.95	12.38%	1.22%
Public Svc Enterprise Group	2.10%	10.81%	12.91%	2.37%	10.54%	0.95	12.38%	4.26%
Sempra Energy	2.10%	10.81%	12.91%	2.37%	10.54%	1.00	12.91%	5.77%
Southern Company	2.10%	10.81%	12.91%	2.37%	10.54%	0.95	12.38%	9.31%
WEC Energy Group	2.10%	10.81%	12.91%	2.37%	10.54%	0.80	10.80%	4.01%
Xcel Energy Inc.	2.10%	10.81%	12.91%	2.37%	10.54%	0.80	10.80%	4.96%
Peer Group Weighted Average	2.10%	10.81%	12.91%	2.37%	10.54%	0.89	11.78%	100.00%
Peer Group Median	2.10%	10.81%	12.91%	2.37%	10.54%	0.90	11.85%	



DCF Earnings Growth Assumptions

	(a)	(b)	(c}	(d)
		Earnings Growth		Relative
Company	<u>V Line</u>	<u>Zacks</u>	<u>Yahoo</u>	Weight
ALLETE, Inc.	5.0%	6.0%	5.7%	0.5%
Alliant Energy Corporation	5.5%	5.9%	5.8%	2.0%
Ameren Corporation	6.5%	7.3%	7.7%	3.0%
American Electric Power	6.5%	5.7%	6.0%	6.0%
Avista Corporation	3.0%	5.1%	6.2%	0.4%
Black Hills Corporation	5.0%	5.1%	4.7%	0.6%
CMS Energy Corporation	6.0%	6.9%	5.7%	2.5%
Consolidated Edison, Inc.	4.0%	2.0%	2.0%	3.6%
Dominion Energy, Inc.	12.0%	6.7%	6.7%	8.4%
Duke Energy Corporation	7.0%	5.3%	5.5%	10.8%
Entergy Corporation	3.0%	1.4%	3.5%	3.0%
Evergy, Inc.	8.0%	6.1%	5.7%	2.0%
Eversource Energy	6.5%	6.4%	6.7%	4.0%
IDACORP, Inc.	4.0%	3.9%	3.2%	0.7%
NextEra Energy, Inc.	10.5%	8.3%	8.2%	21.4%
NorthWestern Corporation	3.0%	4.8%	4.5%	0.4%
OGE Energy Corp.	4.0%	4.5%	3.9%	0.9%
Otter Tail Corporation	7.0%	4.7%	9.0%	0.3%
Pinnacle West Capital	5.0%	5.0%	0.1%	1.2%
Public Svc Enterpirse Group	3.5%	3.5%	2.3%	4.3%
Sempra Energy	10.0%	4.9%	4.3%	5.8%
Southern Company	6.0%	4.9%	6.5%	9.3%
WEC Energy Group	6.5%	6.3%	6.5%	4.0%
Xcel Energy Inc.	6.0%	6.1%	6.3%	5.0%
Peer Group Weighted Average	7.6%	5.9%	6.0%	100.0%
Peer Group Median	6.0%	5.2%	5.7%	

⁽a) The Value Line Investment Survey (July 23, August 13 and September 10, 2021).

⁽b) www.zacks.com (retrieved September 30, 2021).

⁽c] www.zacks.com (retrieved September 30, 2021).

⁽d) Calculated using average of daily closing prices for 13 weeks ending September 24, 2021 and shares outstanding.



DCF Dividend Yield Assumptions

	(a)	(b)	(c]	
Company	Price	Dividend	Yield	Relative Weight
ALLETE, Inc.	68.38	2.61	3.8%	0.5%
Alliant Energy Corporation	59.18	1.68	2.8%	2.0%
Ameren Corporation	85.34	2.31	2.7%	3.0%
American Electric Power	87.61	3.12	3.6%	6.0%
Avista Corporation	42.14	1.73	4.1%	0.4%
Black Hills Corporation	68.50	2.35	3.4%	0.6%
CMS Energy Corporation	62.47	1.79	2.9%	2.5%
Consolidated Edison, Inc.	74.71	3.15	4.2%	3.6%
Dominion Energy, Inc.	76.35	2.59	3.4%	8.4%
Duke Energy Corporation	103.76	3.96	3.8%	10.8%
Entergy Corporation	107.31	4.04	3.8%	3.0%
Evergy, Inc.	65.57	2.26	3.4%	2.0%
Eversource Energy	86.93	2.49	2.9%	4.0%
IDACORP, Inc.	104.23	2.99	2.9%	0.7%
NextEra Energy, Inc.	80.49	1.62	2.0%	21.4%
NorthWestern Corporation	62.33	2.50	4.0%	0.4%
OGE Energy Corp.	34.60	1.66	4.8%	0.9%
Otter Tail Corporation	52.51	1.62	3.1%	0.3%
Pinnacle West Capital	79.96	3.47	4.3%	1.2%
Public Svc Enterpirse Group	62.44	2.08	3.3%	4.3%
Sempra Energy	132.52	4.51	3.4%	5.8%
Southern Company	64.37	2.66	4.1%	9.3%
WEC Energy Group	93.99	2.85	3.0%	4.0%
Xcel Energy Inc.	67.91	1.89	2.8%	5.0%
Peer Group Weighted Average	_		3.2%	100.0%
Peer Group Median			3.4%	

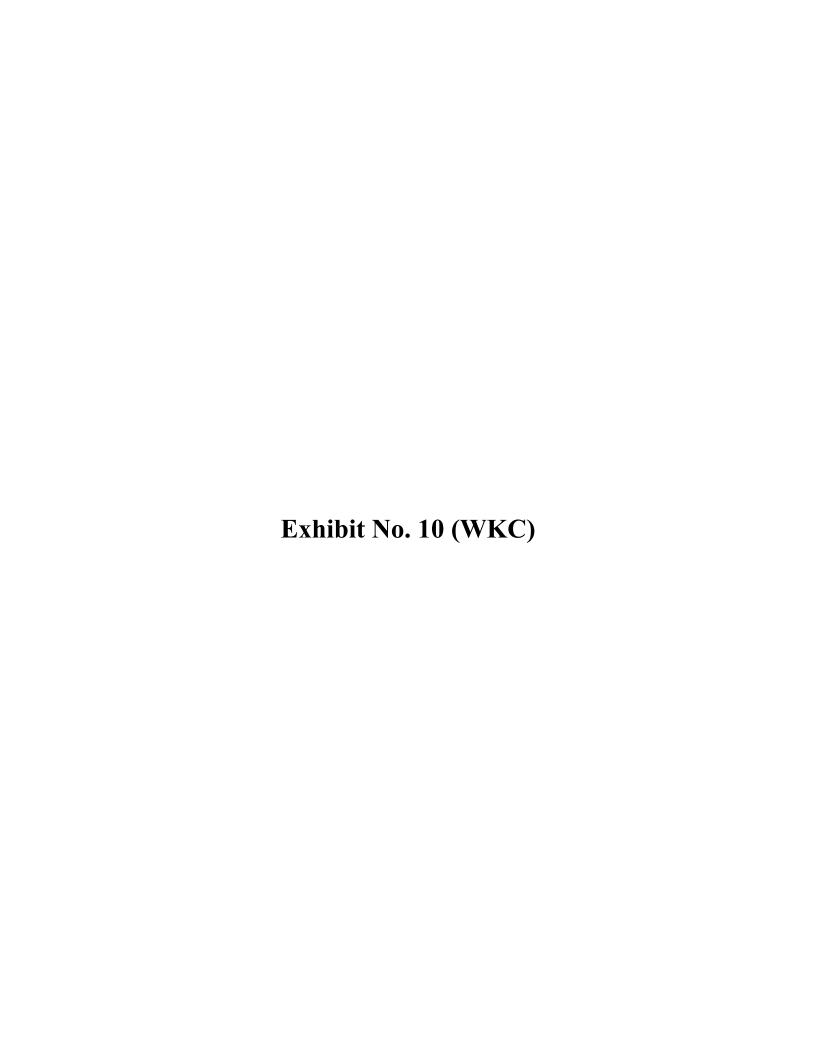


DCF Cost of Equity Estimates

	(a)	(a)	(a)	(b)
	Ex	pected Returr	1	Relative
Company	V Line	Zacks	Yahoo	Weight
ALLETE, Inc.	8.8%	9.8%	9.5%	0.5%
Alliant Energy Corporation	8.3%	8.7%	8.6%	2.0%
Ameren Corporation	9.2%	10.0%	10.4%	3.0%
American Electric Power	10.1%	9.3%	9.6%	6.0%
Avista Corporation	7.1%	9.2%	10.3%	0.4%
Black Hills Corporation	8.4%	8.5%	8.1%	0.6%
CMS Energy Corporation	8.9%	9.8%	8.6%	2.5%
Consolidated Edison, Inc.	8.2%	6.2%	6.2%	3.6%
Dominion Energy, Inc.	15.4%	10.1%	10.0%	8.4%
Duke Energy Corporation	10.8%	9.1%	9.3%	10.8%
Entergy Corporation	6.8%	5.2%	7.3%	3.0%
Evergy, Inc.	11.4%	9.5%	9.1%	2.0%
Eversource Energy	9.4%	9.3%	9.5%	4.0%
IDACORP, Inc.	6.9%	6.8%	6.1%	0.7%
NextEra Energy, Inc.	12.5%	10.3%	10.2%	21.4%
NorthWestern Corporation	7.0%	8.8%	8.5%	0.4%
OGE Energy Corp.	8.8%	9.3%	8.7%	0.9%
Otter Tail Corporation	10.1%	7.8%	12.1%	0.3%
Pinnacle West Capital	9.3%	9.3%	4.4%	1.2%
Public Svc Enterpirse Group	6.8%	6.8%	5.6%	4.3%
Sempra Energy	13.4%	8.3%	7.7%	5.8%
Southern Company	10.1%	9.0%	10.6%	9.3%
WEC Energy Group	9.5%	9.3%	9.5%	4.0%
Xcel Energy Inc.	8.8%	8.9%	9.1%	5.0%
Peer Group Weighted Average	10.8%	9.1%	9.2%	100.0%
Peer Group Median	9.0%	9.2%	9.1%	

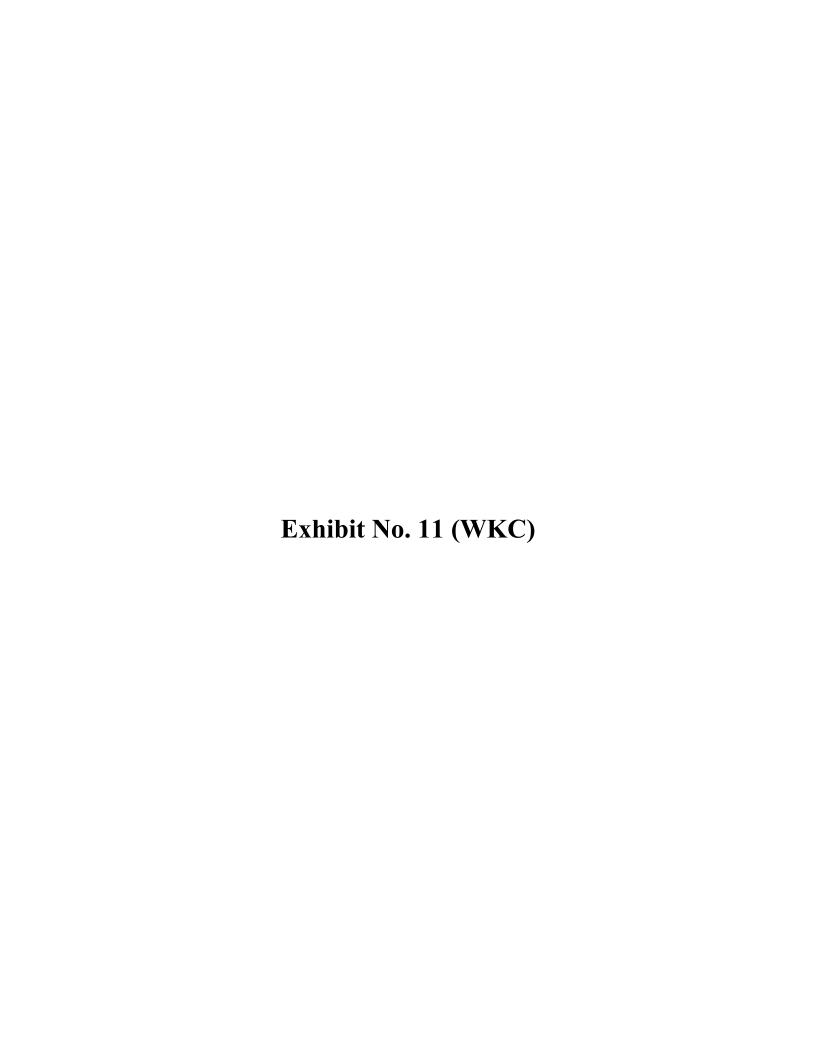
⁽a) Sum of dividend yield and respective growth rate.

⁽b) Calculated using average of daily closing prices for 13 weeks ending September 24, 2021 and shares outstanding.



CAPM & DCF Summary Results

	Weighted Average	<u>Median</u>	<u>Average</u>
DCF	9.7%	9.1%	9.4%
CAPM [Market-weighted Equity]			
30-day current T-bill	11.5%	11.6%	11.6%
30-day projected T-bill	11.5%	11.6%	11.6%
30-year current T-bond	11.7%	11.8%	11.8%
30-year projected T-bond	11.8%	11.9%	11.8%
Average	11.6%	11.7%	11.7%
CAPM [Median Equity]			
30-day current T-bill	10.1%	10.2%	10.1%
30-day projected T-bill	10.1%	10.2%	10.2%
30-year current T-bond	10.3%	10.4%	10.3%
30-year projected T-bond	10.3%	10.4%	10.4%
Average	10.2%	10.3%	10.3%
CAPM Average	10.9%	11.0%	11.0%
CAPM - DCF Average	10.3%	10.1%	10.2%



	Peer Group Earned ROE	
ALE	ALLETE, Inc.	5.5%
LNT	Alliant Energy Corporation	10.6%
AEE	Ameren Corporation	10.4%
AEP	American Electric Power	11.1%
AVA	Avista Corporation	7.2%
ВКН	Black Hills Corporation	9.3%
CMS	CMS Energy Corporation	14.7%
ED	Consolidated Edison, Inc.	5.7%
D	Dominion Energy, Inc.	7.5%
DUK	Duke Energy Corporation	5.7%
ETR	Entergy Corporation	11.3%
EVRG	Evergy, Inc.	9.2%
ES	Eversource Energy	8.8%
IDA	IDACORP, Inc.	10.0%
NEE	NextEra Energy, Inc.	5.8%
NEW	NorthWestern Corporation	13.1%
OGE	OGE Energy Corp.	11.0%
OTTR	Otter Tail Corporation	14.6%
PNW	Pinnacle West Capital	10.4%
PEG	Public Svc Enterprise Group	9.4%
SRE	Sempra Energy	8.8%
SO	Southern Company	9.5%
WEC	WEC Energy Group	12.0%
XEL	Xcel Energy Inc.	11.1%
Average		9.7%
Median		9.7%

ROE as reported by Yahoo Finance October 4, 2021, trailing twelve months