COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

Electronic Application Of Kentucky Power Company	)	
For (1) A General Adjustment Of Its Rates For	)	
Electric Service; (2) Approval Of Tariffs And Riders;	)	
(3) Approval Of Accounting Practices To Establish	)	Case No. 2023-00159
Regulatory Assets And Liabilities; (4) A	)	
Securitization Financing Order; And (5) All Other	)	
Required Approvals And Relief	)	

SECTION III

DIRECT TESTIMONY OF
CARLIN, ALI, BURKHOLDER, STEWARD, AND ADAMS
ON BEHALF OF KENTUCKY POWER COMPANY

VOLUME 4 OF 4

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DIRECT TESTIMONY OF

ANDREW R. CARLIN

ON BEHALF OF KENTUCKY POWER COMPANY

DIRECT TESTIMONY OF
ANDREW R. CARLIN, ON BEHALF OF
KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

CASE NO. 2023-00159

TABLE OF CONTENTS

SECTION **PAGE**

EXHIBITS

Exhibit ARC-5	Target Total Cash Compensation and Total Compensation vs. Market for Executive Positions
Exhibit ARC-6	2022 Short-Term Incentive Framework
Exhibit ARC-7	Benefit Summary Chart 2022-2023
Exhibit ARC-8	Healthcare Benefit Plan and Employee Cost Summary – 2022
Exhibit ARC-9	2023 Employer and Employee Contribution Rates
Confidential Exhibit ARC-10	**CONFIDENTIAL** 2023 Aon Benefit Index
Confidential Exhibit ARC-11	**CONFIDENTIAL** 2022 Willis Towers Watson Healthcare Financial Benchmark Survey

**DIRECT TESTIMONY OF
ANDREW R. CARLIN ON BEHALF OF
KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY**

CASE NO. 2023-00159

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Andrew R. Carlin, and my business address is 1 Riverside Plaza, Columbus, Ohio 43215.

II. BACKGROUND

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND BUSINESS EXPERIENCE.

A. I received a Bachelor of Arts Degree from Bowdoin College in 1988 with majors in both Economics and Government. I also received a Master of Business Administration Degree from the J. L. Kellogg Graduate School of Management at Northwestern University in 1992, with concentrations in finance, management strategy, and accounting.

From 1987 to 1988, I worked for Putnam Investor Services as a Shareholder Services Representative. From 1988 to 1990 and in the summer of 1991, I worked as an Associate Consultant and Research Analyst in the U.S. Compensation Practice for William M. Mercer, a leading international human resource consulting firm. From 1992 to 2000, I worked for Bank One Corporation, now J.P. Morgan Chase, in multiple planning, finance and compensation capacities.

I joined American Electric Power Service Corporation ("AEPSC") as the Director of Executive Compensation & Benefits in 2000. In 2002, my role was expanded to include responsibility for employee compensation in addition to executive compensation and benefits.

Q. BRIEFLY DESCRIBE YOUR DUTIES AND RESPONSIBILITIES AS DIRECTOR – COMPENSATION AND EXECUTIVE BENEFITS.

A. With assistance from other members of the Total Rewards[1] department and oversight from AEP management, I am primarily responsible for designing and administering compensation and executive benefits programs that attract, engage, motivate, and retain employees with the skills and experience needed to provide service to customers effectively, efficiently, and safely. These programs are components of a Total Rewards program that is designed to be market-competitive overall. The Total Rewards team conducts ongoing research and recommends changes to compensation and benefit programs to maintain compensation and benefits at reasonable, prudent, and market competitive levels to achieve these objectives. The team also develops communications materials in support of compensation and benefit programs and maintains compliance with federal and state regulations related to compensation and benefits.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY?

A. Yes. I have testified in person or submitted written testimony in many regulatory proceedings, including case numbers 2009-00459, 2013-00197, 2014-00396, 2017-

[1] Total rewards generally is the value that employees derive from their work, including compensation, benefits, training, development, and recognition.

00179 and 2020-00174 before the Kentucky Public Service Commission ("Commission") on behalf of Kentucky Power. My previous testimony was focused on compensation and benefits.

III. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is to describe the AEP System's total compensation philosophy. I will also present information that demonstrates that the AEP System's employee variable pay programs are reasonable and in the best interests of customers. Accordingly, my testimony will establish that short-term and long-term compensation are necessary components of the AEP System's employee compensation package that is used to attract and retain experienced, skilled, and knowledgeable employees needed to provide safe and reliable electric service to Kentucky Power customers.

Q. ARE YOU SPONSORING ANY EXHIBITS OR SCHEDULES?

A. Yes, I am sponsoring the numerous Exhibits listed in the table of contents to my testimony. I am not sponsoring any schedules.

- Exhibit ARC-1 - Compensation Survey List
- Exhibit ARC-2 - Target Total Cash Compensation vs. Market for Technical, Craft and Clerical Positions
- Exhibit ARC-3 - Target Total Cash Compensation vs. Market for Nonexempt Salaried Positions
- Exhibit ARC-4 - Target Total Cash Compensation vs. Market for Exempt Positions
- Exhibit ARC-5 - Target Total Cash Compensation and Total Compensation vs. Market for Executive Positions
- Exhibit ARC-6 - 2022 Short-Term Incentive Framework

- Exhibit ARC-7 - Benefit Summary Chart 2022-2023
- Exhibit ARC-8 - Healthcare Benefit Plan and Employee Cost Summary – 2022
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IV. EXECUTIVE SUMMARY

Q. PLEASE GENERALLY DESCRIBE THE COMPANY'S REQUEST WITH RESPECT TO COMPENSATION IN THIS PROCEEDING.

A. The Company is requesting inclusion of the target level of direct Kentucky Power Company and indirect Wheeling Power Company annual or short-term incentive ("STI") compensation of $1,862,503 and long-term incentive ("LTI") compensation of $181,125 in cost of service. The indirect target level of STI and LTI allocated from Wheeling Power Company is Kentucky Power Company's ownership share of the Mitchell and Kammer generating plants. The adjustment to reduce the cost of this annual and long-term incentive compensation to the target level is supported by Company Witness Whitney.

The Company faces unrelenting competition for employees with other utilities and utility contractors both within and outside our service territory, as well as with employers in other industries, such as construction and oil and gas. The provision of market-competitive compensation and benefits is necessary to enable the attraction and retention of employees with the skills and experience necessary to provide reliable electric service, in a manner that is safe, efficient, effective and at a reasonable cost to

Kentucky Power customers. This testimony demonstrates that the compensation and benefits the Company offers employees, inclusive of STI and LTI compensation, is customary, prudent, reasonable, market competitive, and a benefit to customers.

The Company's compensation and employee benefits are managed, with those of other AEP system companies, within the context of labor market trends, to control employee labor and benefit expense for the benefit of both customers and shareholders. The Company's Base Pay increase budgets substantially lagged behind the market median in 2009 and 2010 and have only recently largely made up the lost ground. Base pay growth was accelerated in 2022 and 2023 to address attraction and retention issues, but this is not expected to significantly increase the Company's compensation relative to market-competitive compensation.

There are certain disciplines for which market-competitive total compensation is increasing faster than for other positions, such as journey level line mechanics, for which there is a significant shortage. This line mechanic shortage is likely to continue to drive higher compensation growth rates for these Kentucky Power employees as well as for line mechanics at other Kentucky utilities, contractors supporting utilities, and all employers of line mechanics nationwide.

Short-Term Incentive (STI) compensation benefits customers, by enabling the Company to attract and retain suitable the suitably skilled and experienced employees needed to provide service to customers efficiently, effectively, and safely as part and parcel of a reasonable and market competitive Total Compensation package. The ability to attract and retain such a workforce is essential to meeting customers' needs at a reasonable cost because offering less than market competitive compensation would increase hiring and training costs, reduce productivity, increase position vacancy, decrease outage response time and service levels, and increase the cost of service for customers. Because the target level of Company's Incentive Compensation is a component of a reasonable and market competitive Total Compensation package, it provides these benefits without incurring any incremental cost above the cost of providing market competitive compensation through Base Pay alone. Among many other benefits, STI compensation helps maintain higher levels of employee and company performance than would be achieved using Base Pay alone, which benefits customers by completing work more efficiently and effectively and thereby reducing costs. The financial portion of short-term incentive compensation benefits customers by continuously emphasizing the importance of financial discipline and directly encouraging employees to maintain financial discipline, spend conservatively, operate efficiently, and conserve resources, which is essential for providing reliable service at a reasonable cost to customers.

The Company's LTI compensation is similar to STI compensation in that it too is an integral component of reasonable and market competitive Total Compensation package for participants. In addition to the benefits mentioned above that STI compensation provides to customers, LTI compensation provides a retention incentive to participants that benefits customers by improving the retention of employees with greater Company experience in roles that have long-term decision-making responsibility, which improves the continuity of the Company's operations and benefits customers by providing more efficient, effective, and consistent operations. Financial LTI measures also communicate that it is imperative to maintain financial discipline and strongly encourage its pursuit, which directly benefits customers by reducing the Company's cost of service and rates compared to what they would otherwise be. LTI also encourages a longer-term decision-making perspective, which is particularly imperative given the expected long service life of the assets that comprise the Company's electric system.

V. OVERVIEW OF COMPENSATION PRACTICES

Q. WHAT ARE THE COMPENSATION TERMS USED IN THIS TESTIMONY?

A. The Company compensates all employees, except co-op students and interns, with a combination of a fixed base wage or salary ("Base Pay") and a variable annual short-term incentive ("STI") compensation opportunity. I refer to the sum of these two types of compensation (Base Pay + STI) as Total Cash Compensation ("TCC").

Approximately 1,425 AEP positions also have a regular annual long-term incentive ("LTI") compensation opportunity. These positions generally require unique skills and involve roles for which long-term continuity, prudency, and vision are required.

Total Compensation is comprised of Base Pay, STI compensation and, for eligible positions, LTI compensation: (Base Pay + STI + LTI = Total Compensation). I refer to the sum of STI and LTI, if applicable, collectively as Incentive Compensation. Total Compensation and TCC are the same for employees in positions that do not have a regular annual LTI opportunity.

I refer to the target value of Incentive Compensation as Target STI, Target LTI or collectively as Target Incentive Compensation. When target values of Incentive

Compensation are combined with Base Pay, I refer to these values as Target TCC (Base Pay + Target STI = Target TCC) or Target Total Compensation (Base Pay + Target STI + Target LTI = Target Total Compensation).

Q. PLEASE DESCRIBE THE VARIOUS TYPES OF EMPLOYEES THAT WORK FOR THE COMPANY AND HOW EACH TYPE OF EMPLOYEE IS COMPENSATED.

A. The Company employs physical, craft, and technical employees, such as line mechanics and general servicers who are paid an hourly wage, with the potential for overtime and shift premiums, along with an STI opportunity. Wage increases for these employees primarily take the form of an annual general wage increase, which ensures that the Company's wages keep pace with labor market increases. The Company also provide equity adjustments, when needed, to address gaps to market-competitive wages, to standardize wages with those of other AEP operating companies and to address internal equity issues. AEPSC and the Company negotiate wage rates and increases for most physical, craft, and technical employees with labor unions as part of a collective bargaining process and agreement. Market median compensation rates, the growth rate of wages, employee turnover in these positions, union bargaining positions, and the wages paid by competitors for these employees are considered in determining AEPSC and the Company's positions for labor negotiations. Collectively bargained rates are generally mirrored in setting wages for unrepresented physical, craft, and technical employees. As a result, the wages the Company offers to employees for both represented and unrepresented physical, craft, and technical positions generally track market-competitive compensation.

Physical, craft, and technical employees also progress through job steps and job levels as they accumulate the experience and other qualifications needed to perform more demanding, dangerous, and challenging work safely. For example, Line Mechanics must complete the experience and other qualifications for Line Mechanic A, step 1 to progress from the top Line Mechanic B step (step 2) and begin receiving both the pay and work responsibilities associated with the higher position.

The Company also employs non-exempt salaried employees as well as exempt professional, managerial, and executive employees. Employees in these types of positions participate in an annual performance review and merit pay program, along with the annual STI program. Some professional positions, many managerial positions, and all executive positions also participate in an LTI program. AEPSC's compensation team compares the compensation for these positions to market survey information to assign or reassign positions to salary grade levels and recommend compensation and other changes to maintain Total Compensation at reasonable and market-competitive levels.

Q. DOES THE COMPANY FACE COMPETITION FOR SUITABLE EMPLOYEES?

A. Yes. The Company is in continuous competition to attract and retain suitable employees for nearly all positions. The competition is particularly stiff and relentless for fully trained employees with the necessary skills and experience needed to provide service to customers efficiently, effectively, and safely. Increased demand for such employees, as baby boomers and others leave the labor market, and increased labor market inflation all recently increased the cost of labor, employee turnover, time to hire, and hiring costs. The Company's current and prospective employees largely have other options and no pressing need to accept or continue an employment relationship with the Company. Therefore, the Company has little choice but to provide market completive compensation and benefits as well take other appropriate actions to maintain and enhance the Company's reputations as desirable, respectable, and safe places to work.

The Company competes for these employees with other utilities and utility contractors both within and outside our service territory, as well as with employers in other industries, such as construction and oil and gas. Utility contractors perform roughly half of the Company's physical, craft, and technical work, and the entities that perform this work compete with the Company, directly or indirectly, for suitable employees. Utility contractors are free to structure the mix of Base Pay, Incentive Compensation, and employee benefits that they offer to employees in any manner that best suits their needs, and the labor market will bear. This gives utility contractors a competitive advantage over regulated utilities, which may not always obtain full rate recovery of the compensation and benefits offered to employees.

The market survey data in Exhibits ARC 3-6 show that, at the median, employers provide Incentive Compensation to all positions offered within the Company and AEPSC for which survey data is available. I discuss this in more detail in the Competitiveness of Total Compensation section below. As a result, it is likely that most of the contract labor performing work for Kentucky Power Company work receives Incentive Compensation.

Q. WHAT IS THE COMPANY'S AND AEPSC'S OVERALL APPROACH TO COMPENSATION?

A. The primary objective of Company's Total Compensation program is to enable the attraction and retention of the suitably skilled and experienced employees needed to provide service to customers efficiently, effectively, and safely, which are identifiable customer benefits. The Company's compensation is managed by the AEPSC compensation team within the Human Resources department, in a manner that is generally consistent with that of other AEP system companies, based on labor market trends, business needs, labor negotiations, employee turnover and hiring trends, among other factors. The compensation strategy for achieving this objective is to provide a Total Compensation opportunity that is, on average, at the median of the Total Compensation opportunities provided for similar positions in the labor market. Focusing on Total Compensation opportunity, rather than Base Pay alone, is the correct methodology for compensation comparisons because only Total Compensation takes all statistically significant types of compensation into account.

As with most large employers, we find that providing a market-competitive Total Compensation package to employees is an efficient and effective strategy because it allows the Company to attract and retain the suitably skilled and experienced employees needed to provide service to customers without either paying above median Total Compensation or creating excessive position turnover and vacancy.

For positions that are specific to the energy services industry, the AEPSC compensation tam uses energy services industry specific compensation survey data, which is the only type of data available for positions specific to this industry. For positions found in multiple industries, the Companies use general industry survey data, which provides the largest possible sample. In both cases, because AEP operates in multiple states and regions of the United States, the AEPSC compensation team uses U.S. national compensation survey data, which has the benefit of providing the largest and most statistically significant sample.

The Total Compensation opportunity that the Company and other regulated AEP affiliates provide is comprised of Base Pay and a variable 'at risk' Incentive Compensation opportunity. As part and parcel of a reasonable, customary, and market-competitive Total Compensation, the Company provides variable Incentive Compensation to motivate and encourage employees to control costs, improve customer service, and work safely, among other reasons. As such, the variable Incentive Compensation portion of Total Compensation is compensation the Company and AEPSC would need to provide as Base Pay if it did not provide variable Incentive Compensation. This also has the advantage, compared to fixed Base Pay, of encouraging employees to improve their performance, which collectively results in improved performance of the Company and better service rendered to customers. Including variable Incentive Compensation in the Total Compensation mix allows operational goals to be communicated more effectively, aligns employee efforts with these goals, encourages goal achievement, and bolsters the development of a high-performance culture, all without increasing compensation expense.

Because Incentive Compensation fosters a better performing workforce than Base Pay alone, we believe that a blend of these two types of compensation is the most cost efficient and effective compensation strategy for providing reliable electric service to customers. This approach also better enables the Company to compete in the labor market to attract, retain and engage higher performing employees than it otherwise would with the same amount of Total Compensation provided only in the form of Base Pay. The benefits provided by variable Incentive Compensation (better operational performance, improved teamwork, and reduced cost, among other benefits) reduce the Company's cost of providing electric service, which directly benefits customers.

Q. DOES THE USE OF MARKET MEDIAN AS THE COMPANY'S AND AEPSC'S PRIMARY COMPENSATION BENCHMARK IMPLY THAT EMPLOYEE COMPENSATION WILL GENERALLY BE AT THE MEDIAN?

A. Not necessarily. First, variances in job requirements, employer pay practices, and locational differences create a range of market compensation rates; therefore, compensation practices are designed to deliver compensation that is within a market-competitive range around the market median. In addition, salary ranges for each salary grade extend approximately 22.5% above and below the midpoint, to reflect the range of compensation for positions. The salaries of individual salaried employees may fall anywhere within the assigned range depending on individual performance, qualifications, time in job, and other factors. Furthermore, the employers that participate in compensation surveys, the incumbents in the jobs reported in those surveys, and the compensation for these incumbent employees are all constantly changing so it is not possible to precisely set compensation levels given this constantly moving target.

Q. HOW DO YOU DETERMINE THAT TOTAL COMPENSATION LEVELS ARE REASONABLE AND MARKET-COMPETITIVE?

A. The AEPSC compensation team compares the Company's and other AEP affiliate's compensation levels and practices to those of similar employers for similar positions to ensure that they are reasonable and market competitive. The AEPSC compensation team relies on third-party compensation surveys to provide robust market compensation benchmarks based on statistically sound survey methodologies, including extensive and independently verified compensation information for statistically significant samples of incumbents in a wide variety of jobs.

To make these comparisons, the AEPSC compensation team matches the Company's and other AEP affiliate positions to the survey positions based on each job's function, specialty, level, survey company input and other factors. The AEPSC compensation team then compares compensation levels and practices to the survey sample to determine the best compensation benchmark for each matched job, considering any material differences in each position's scope. Market median target Total Compensation is generally used as the primary compensation benchmark. Base Pay and Target TCC are used as additional points of comparison. The AEPSC compensation team then assigns each merit pay eligible job to a salary grade, with an associated salary range, STI target and, if applicable, LTI target based on the range that best fits each position's market compensation benchmarks, while also providing a smooth grade progression for job families and internal equity. The AEPSC compensation team also uses this process to periodically review and update compensation rates, salary grades, incentive targets and other compensation practices to maintain market-competitive compensation for each position. This process is consistent with the compensation practices of most electric utilities and other large U.S. companies like Kentucky Power. The market compensation surveys completed and used in this process to evaluate compensation for the test year are listed in Exhibit ARC-1.

Q. WHY IS TOTAL COMPENSATION CHOSEN AS THE PRIMARY POINT OF COMPARISON RATHER THAN BASE SALARY?

A. The AEPSC compensation team uses Total Compensation as the primary point of comparison because it includes all statistically significant types of employee compensation. Only with the inclusion of the variable incentive portion does the Company's and AEPSC's Total Compensation generally reach the market-competitive range; without it, Total Compensation would not be market-competitive. Moreover, survey information shows definitively that STI is a significant component of market-competitive compensation for all the Company's and AEPSC's positions. Likewise, survey information shows that LTI is a significant and often substantial component of market competitive compensation for those positions that annually participate in AEP's LTI program. Therefore, any assessment of market competitive compensation for the Company's and AEPSC's positions that does not include both types of incentive compensation would be invalid.

In addition, because the AEPSC compensation team considers the value of Incentive Compensation provided by both the market in assigning job grades to positions, the Company's Base Pay levels are typically lower than employers that provide less or no Incentive Compensation opportunity. Because the mix of Base Pay, STI, and LTI in Total Compensation can vary significantly across employers, any Total Compensation analysis that does not consider Incentive Compensation is incomplete.

Q. DOES THE TARGET LEVEL OF INCENTIVE COMPENSATION CONTRIBUTE TO A TOTAL COMPENSATION OPPORTUNITY THAT EXCEEDS THE MARKET-COMPETITIVE RANGE OR A REASONABLE LEVEL?

A. No. Unlike some other ‘bonus’ type incentive plans, the target level of the Company’s Incentive Compensation does not create Total Compensation that is over and above market-competitive Total Compensation. Instead, the target level of the Company’s Incentive Compensation is a portion of a market-competitive and reasonable Total Compensation package that is at risk to encourage performance improvement and the achievement of performance goals and objectives.

The Company is requesting that only the target portion of 1. The direct cost of Kentucky Power Company STI and 2. the allocated ownership share of the Mitchell and Kammer plants STI for the test year be included in the Company’s cost of service, rather than the actual cost, which was substantially higher. The adjustment to reduce these annual and long-term incentive compensation expenses to the target level is supported by Company Witness Whitney.

When combined with Base Pay, the target value of STI is designed to bring employee Total Compensation to a market-competitive and reasonable level. Therefore, the target value of Incentive Compensation is a critical component of the market-competitive Total Compensation package that the Company depends on to help attract and retain qualified employees.

VI. ACTIONS TAKEN TO CONTROL COMPENSATION EXPENSE

Q. HOW DO THE COMPANY'S BASE PAY INCREASES COMPARE TO THOSE OF OTHER UTILITY INDUSTRY EMPLOYERS?

A. As Figure ARC 1 below demonstrates, the Company's total Base Pay increases for nonexempt salaried, exempt and executive positions lagged the market median rate of Base Pay increases over the 2009 through 2021 period, only catching up in 2022 and 2023 for exempt and non-exempt salaried positions. Executive Base Pay increases continue to lag behind the market by 2.47%. This lag is primarily the result of a salary freeze that occurred in 2009 for most positions and in both 2009 and 2010 for executive positions that the Company and other AEP affiliates implemented in response to the recession that began in 2008. Figure ARC-1 below compares the Company's and AEPSC's salary increase budgets to median utility industry Base Pay increase budgets for these types of positions for the years 2009 through 2023 (projected).

Figure ARC-1

	Nonexempt Salaried		Exempt		Executive	
	Industry*	Company & Other AEP Affiliates	Industry*	Company & Other AEP Affiliates	Industry*	Company & Other AEP Affiliates
2009	2.75%	0.00%	2.50%	0.00%	2.00%	0.00%
2010	2.70%	2.00%	3.00%	2.00%	2.95%	0.00%
2011	3.00%	3.20%	2.90%	3.20%	3.00%	3.20%
2012	2.75%	2.68%	3.00%	2.68%	3.00%	2.68%
2013	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
2014	3.00%	3.35%	3.00%	3.35%	3.00%	3.35%
2015	3.00%	3.50%	3.00%	3.50%	3.00%	3.00%
2016	3.00%	3.50%	3.00%	3.50%	3.00%	3.00%
2017	3.00%	3.50%	3.00%	3.50%	3.00%	3.50%
2018	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
2019	3.00%	3.50%	3.00%	3.50%	3.00%	3.50%
2020	3.00%	3.50%	3.00%	3.50%	3.00%	3.50%
2021	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
2022	3.00%	3.50%	3.00%	3.50%	3.00%	3.50%
2023**	4.00%	4.50%	4.00%	4.50%	4.25%	4.50%
Total	45.20%	45.73%	45.40%	45.73%	45.20%	42.73%
Difference		0.53%		0.33%		-2.47%

*The Conference Board Research Report, U.S. Salary Increase Budgets for 2010-2023
**The Conference Board projected 2023 market median vs. the Company's and other AEP Affiliate's 2023 actual salary increase budget, which includes 0.5% for target equity adjustments held at the senior management level. 4.09% of the 4.50% increase budget was implemented effective April 1, 2023.

For hourly physical, craft, and technical employees, Base Pay increases lagged the market and continue to lag the market. Figure ARC-2 below shows that for the period 2009 through 2023 (projected), the Company's and other AEP affiliates' Base Pay increases for hourly physical, craft, and technical employees lagged the market median by 2.95%.

Figure ARC-2		
	Hourly Physical, Craft, and Technical Employees	
Year	Utility Industry Market Median*	Company and Other AEP Affiliates
2009	2.50%	0.00%
2010	2.85%	2.00%
2011	2.90%	3.00%
2012	3.00%	2.00%
2013	3.00%	2.50%
2014	3.00%	2.50%
2015	3.00%	3.50%
2016	3.00%	3.50%
2017	3.00%	5.00%
2018	3.00%	2.50%
2019	3.00%	3.50%
2020	3.00%	3.50%
2021	3.00%	2.50%
2022	3.20%	3.00%**
2023***	4.00%	3.50%
Total	45.45%	42.50%
Difference		-2.95%
* The Conference Board Research Report, U.S. Salary Increase Budgets for 2010-2023. **There were additional 2022 wage increases for some physical and craft employees, which are described in the following two paragraphs below. ***The Conference Board projected 2023 market median vs. the Company's and other AEP Affiliates' 2023 collectively bargained wage increases.		

Effective January 1, 2022, as collectively bargained or determined by AEPSC management, the Company and other AEP affiliates implemented a 2.0% shift of incentive compensation to base wages effective January 1, 2022. This was applicable to wages for most represented positions and unrepresented employees in similar physical and craft positions. This reduced incentive targets for most of these positions by 2.0% of base pay (from 5% to 3%) and increased base pay rates by the same 2.0%.

This change in compensation mix was approximately cost neutral at the target level of incentive compensation and it is therefore not included in Figure ARC-2.

Effective January 1, 2022, the Company and other AEP affiliates also provided an additional 1.0% base pay increase for journey level line workers and reduced the number of steps required to obtain the journey level.

Effective October 1, 2022, in reaction to a tightening labor market and difficulty retaining and attracting employees qualified for certain journey level skilled jobs, the Company and other AEP affiliates increased wages for journey level distribution line, transmission line, transmission station, and network jobs by ~7.5% and increased wages for journey level protection & control and meter jobs by ~4.5%. Figure ARC 3 below shows the elevated levels of turnover AEP has experienced since 2019, particularly for journey level line workers, which underscores the need for these additional increases.

Figure ARC-3			
	AEP Total		
	Loss	Total in Job	% Loss
2022 Thru 7/1, not annualized			
Line Journey Level	37	1391	2.66%
Line Apprentice	8	638	1.25%
All other Craft Workers	15	2920	0.51%
2021			
Line Journey Level	54	1384	3.90%
Line Apprentice	16	609	2.63%
All other Craft Workers	12	2881	0.42%
2020			
Line Journey Level	42	1335	3.15%
Line Apprentice	16	619	2.58%
All other Craft Jobs	7	2794	0.25%
2019			
Line Journey Level	75	1365	5.49%
Line Apprentice	25	597	4.19%
All other Craft Workers	14	2768	0.51%

Figure ARC-1 and Figure ARC-2 above show that the Company's Base Pay increase budgets substantially lagged the market median in 2009 and 2010 and have yet to make up all the lost ground. Base pay growth was accelerated in 2022 and 2023 to address attraction and retention issues but AEP's compensation team does not expect this to significantly increase the Company's compensation relative to market-competitive compensation, given the increased rate of labor market inflation for 2022 that continued into 2023. Reducing and managing the growth of employee wages, particularly during times of substantial economic downturn, is one of several difficult steps that the Company and other AEPSC affiliates have taken to control labor expense for the benefit of customers. The impact of these steps is still apparent today, as the above figures show. These actions, along with continued employee teamwork and commitment, directly reduced the cost of providing electric service to Kentucky Power customers and the savings that remain will again be passed on Kentucky Power's customers as part of this rate proceeding.

Q. DID THE COMPANY IMPLEMENT SALARY AND WAGE INCREASES FOR OTHER TYPES OF EMPLOYEES IN 2022 AND 2023?

A. Yes. For those employees who are eligible for merit-based salary increases, the Company and other AEP Affiliates implemented 3.50% total salary increase budget effective April 1, 2022, which consisted of a 3.00% merit budget, a 0.25% line of progress promotion and equity adjustment budget and an additional 0.25% budget reserved by management for particularly competitive positions for which attraction and retention are a concern.

In addition, although just outside the test period for this case, the Company and other AEP affiliates also implemented 4.50% total salary increase budget effective April 1, 2023, which consisted of a 3.50% merit budget, a 0.50% line of progress promotion and equity adjustment budget and an additional 0.50% budget reserved by management for particularly competitive positions for which attraction and retention are a concern.

VII. <u>COMPETITIVENESS OF TOTAL COMPENSATION</u>

Q. HOW SHOULD THE COMPETITIVENESS OF THE COMPANY'S COMPENSATION BE ASSESSED?

A. All statistically significant forms of compensation should be considered in any analysis of compensation competitiveness. Because Incentive Compensation is a statistically significant form of compensation for 100% of the Company's and other AEP Affiliate's positions, it should be included in any such analysis. The Company compete for employees with a great many other employers, a majority of which offer Incentive Compensation to the employees over which we compete. The Commission should look to whether Total Compensation, inclusive of Incentive Compensation, is within a market competitive range because such market competitive compensation is needed to attract and retain employees with the knowledge, experience, and qualifications needed to provide reliable electric services to customers efficiently, effectively, and safely, while minimizing overall expense.

Although reducing Total Compensation to less than the market-competitive range would reduce compensation expenses, this cost reduction would likely be more than offset by increased position vacancy, which reduces effectiveness, and increased hiring and training expenses due to increased employee turnover, as well as lower employee productivity, given the many years it often takes new employees to learn to perform their jobs safely, efficiently, and effectively. This is particularly true for positions that require lengthy apprenticeships or training periods to learn the skills needed to work independently and safely, such as the lineman job family, which requires five years to reach the journeyman level. In addition, it generally takes around three months to fill vacant positions and much longer for new employees to come up to speed on new duties, work processes and safety procedures. This lost or reduced productivity often must be backfilled by employees who are less efficient at this work, such as employees who normally perform other duties, or who are more expensive, such as the vacant position's supervisor. Employee turnover gives rise to many other incremental costs beyond the examples cited above. The incremental cost to customers of reduced service quality that results from increased vacancy as well as the increased hiring and training expense due to higher employee turnover are the primary reasons that the provision of market-competitive Total Compensation is in the interests of, and is a benefit to, Kentucky Power's customers.

Q. HOW DOES TARGET TOTAL COMPENSATION FOR HOURLY PHYSICAL, CRAFT, AND TECHNICAL POSITIONS COMPARE WITH MARKET DATA?

A. As shown in Exhibit ARC-2, Kentucky Power's and AEPSC's average target TCC for 63 hourly physical, craft, and technical positions in seven different Kentucky Power and AEPSC jobs was 2.4% below the market median as of March 31, 2023.[2] Assuming a market-competitive compensation range of +/- 10% of the survey median, which is typical practice for such positions, this shows Kentucky Power's and AEPSC's average target TCC is within the market-competitive range and reasonable relative to market-competitive Total Compensation.

Comparing Base Pay to market TCC further confirms that the Company's TCC, inclusive of STI, is market competitive. If STI were excluded (*i.e.*, comparing the Company's and AEPSC's Base Pay to market TCC) as shown by the graph in Exhibit ARC-2, then average compensation would be 5.5% below the market median, which would be in the bottom quartile of the market-competitive range.

[2] Data source: Willis Towers Watson 2022 Energy Services Technical Support and Operations Survey Report – United States Compensation Report – Results by Function/discipline/Level (Incumbent Weighted).

Q. ARE THERE DISCIPLINES FOR WHICH MARKET-COMPETITIVE TOTAL COMPENSATION IS INCREASING FASTER THAN FOR OTHER POSITIONS?

A. Yes, certainly. There is a significant shortage of journey-level line mechanics and compensation is increasing accordingly for these Kentucky Power employees and for other Kentucky utilities and contractors. Employers, particularly utilities with an obligation to serve, often have little choice but to react to labor supply shortages by increasing the compensation they pay for the employees they need that are in short supply. Cybersecurity, data science, and forestry are other examples of disciplines for which compensation has been increasing at significantly higher than average rates.

Q. HOW DOES TARGET TOTAL COMPENSATION FOR SALARIED NONEXEMPT POSITIONS COMPARE WITH MARKET DATA?

A. Exhibit ARC-3 indicates that, on average, the Company's and AEPSC's target TCC for 29 salaried nonexempt positions with 563 employees is near the middle of the market-competitive range (0.8% above the market median). However, like the compensation for hourly employees and consistent with the Company's and AEPSC's Total Compensation design, STI is an integral component of the market-competitive Total Compensation Opportunity for these employees. If STI is excluded, as shown by the graph in Exhibit ARC-3, then the average target TCC for these positions would be 5.8% below the market median and 41% of these positions would be paid less than the market-competitive range.

Q. HOW DOES TARGET TOTAL COMPENSATION FOR NON-MANAGERIAL EXEMPT POSITIONS COMPARE WITH MARKET DATA?

A. Exhibit ARC-4 compares the Company's and AEPSC's compensation for non-managerial exempt positions to market survey information[3] using a slightly broader +/-15% of market median as the market-competitive range, which is typical for exempt positions. The average target TCC for these positions was near the middle of the market competitive range (1.7% below median) but, if STI were excluded, as shown by the graph in Exhibit ARC-4, then the average target TCC for these 245 positions with 2,622 employees would be 12.6% below the market median and 43% of these positions would be paid below the market-competitive range.

Q. HOW DOES TARGET TOTAL COMPENSATION FOR EXECUTIVE POSITIONS COMPARE WITH MARKET DATA?

A. The Human Resources Committee of AEP's Board of Directors ("HR Committee") annually engages a nationally recognized, independent executive compensation consulting firm to conduct a compensation study of executive positions. The peer group used for this study consists of companies specifically selected by the HR Committee to represent the talent markets in which AEP compete to attract and retain senior management and executive employees. For the year 2022, executive compensation was within the market-competitive range overall for 20 executive positions whose compensation is billed to Kentucky Power (See Exhibit ARC-5). However, as shown in the graph in Exhibit ARC-5, Total Compensation predominantly would be below the

[3] Sources: Willis Towers Watson 2022 Energy Services Middle Management & Professional Survey and Willis Towers Watson 2022 General Industry Middle Management & Professional Survey, April 2022.

market-competitive range without the STI component of Total Compensation. Additionally, without the LTI component all these positions would be below the market-competitive range.

Q. IS THE COMPENSATION OPPORTUNITY THAT THE COMPANY'S AND AEPSC's INCENTIVE COMPENSATION PROVIDES NECESSARY FOR ATTRACTING AND RETAINING SUITABLE EMPLOYEES?

A. Yes. It is a best practice in compensation design to rely on robust compensation survey data for similar employers, such as the data included in exhibits ARC-2 through ARC-5, to gauge the reasonableness of employee compensation. These exhibits support the reasonableness of AEP's compensation levels as compared to other non-affiliated utility and other comparable employers. They also show that without the target value of Incentive Compensation, the compensation opportunity that the Company and other AEP Affiliates provide to employees would not be market competitive in many cases. For higher-level management and executive positions, the portion of compensation provided by STI and LTI compensation is necessary, both individually and in combination, to maintain any semblance of market-competitive total compensation for these positions. It is highly likely that, without the compensation opportunity that Incentive Compensation provides, the Company and AEPSC would experience increased turnover among all categories of employees and problematic levels of turnover for the many positions for which the average TCC would then be below the market-competitive range. Turnover becomes problematic for Kentucky Power customers when the Company and AEPSC cannot retain enough skilled and experienced employees to provide service efficiently, effectively, and safely to customers, which results in longer outages and increased costs to customers. These analyses shows that the portion of compensation provided by STI for all types of employees is necessary to maintain the competitiveness of the Company's and AEPSC's Total Compensation. As such, the target expense associated with the Company incentive compensation for all types of positions, irrespective of the form in which it is provided, is a necessary, reasonable, and appropriate cost of providing the electric service to Kentucky Power customers.

Q. DOES ANY PORTION OF THE TARGET LEVEL OF INCENTIVE COMPENSATION EXCEED THE AMOUNT THAT IS REQUIRED TO PROVIDE MARKET-COMPETITIVE COMPENSATION TO EMPLOYEES?

A. No. As Exhibits ARC-2 through ARC-5 show, the target STI and LTI components of Total Compensation are not a 'bonus' that provides compensation in excess of market competitive Total Compensation. Rather, such Incentive Compensation is a critical element of a reasonable, necessary, and prudent market competitive Total Compensation package.

Q. ARE BOTH BASE PAY AND INCENTIVE COMPENSATION PART OF AN OVERALL REASONABLE LEVEL OF TOTAL COMPENSATION?

A. Yes. As shown for each group of employees in the preceding questions, the Total Compensation for all types of positions is within the market competitive range, which is a reasonable level of compensation.

VIII. THE BENEFITS OF INCENTIVE COMPENSATION

Q. WHAT ARE THE BENEFITS TO KENTUCKY POWER CUSTOMERS OF THE COMPANY'S INCENTIVE COMPENSATION?

A. First and foremost, the Company's STI and LTI compensation benefits customers as part and parcel of a Total Compensation package that enables the Company to attract and retain the suitably skilled and experienced employees needed to provide service to customers efficiently, effectively, and safely. The ability to attract and retain such a workforce is, quite simply, essential to meeting customers' needs at a reasonable cost. Without the compensation opportunity that the Company's Incentive Compensation provides, the Total Compensation for many positions would be below the market-competitive range, as shown in Exhibits ARC-2 through ARC-5. This would impair the Company's ability to attract and retain such employees, increase employee turnover, and reduce employee engagement. This, in turn, would increase hiring and training costs, reduce productivity, increase position vacancy, decrease response time and service levels, and increase the cost of service for customers.

Because the Company's Incentive Compensation is a component of a reasonable and market competitive Total Compensation package (i.e., within the market-competitive range), it has no incremental cost above the cost of providing market competitive compensation through Base Pay alone.

Incentive Compensation also helps maintain higher levels of employee and company performance than would be achieved using Base Pay alone. It does this by linking a portion of employees' total compensation opportunity to performance without increasing the Company's compensation expense.

Q. HOW DOES INCENTIVE COMPENSATION IMPROVE EMPLOYEE AND COMPANY PERFORMANCE?

A. It does so by more effectively communicating goals and objectives, better aligning employee efforts with these goals and objectives, more effectively engaging employees, and motivating employees to achieve higher levels of performance. Specifically, incentive compensation helps create a culture of high performance by:

- Giving all employees a personal stake in achieving common goals and objectives, which creates a sense of shared purpose and improves employee engagement, which is linked to improved employee and company performance
- Communicating goals and objectives to all managers and employees more effectively than is otherwise possible, which helps align and focus work assignments and employee efforts with these objectives
- Encouraging and motivating employees to expend discretionary effort to achieve these goals and objectives
- Varying compensation based on individual employee performance, which recognizes and appropriately adjusts compensation, which improves employee engagement, encourages performance improvement, improves retention of high performers, and reduces retention of poor performers
- Rewarding employees for achievement of the Company's goals and objectives, which reinforces the importance of these goals and objectives, recognizes both high and low performance and improves employee engagement
- Shifting a portion of compensation from a fixed to variable expense, which reduces business risk by linking a portion of labor expense to the Company's financial performance and better balances the interests of employees with those of other stakeholders
- Encouraging high levels of productivity and fostering careful cost management

These specific benefits of incentive compensation significantly reduce the cost of service for Kentucky Power's customers below what they would be otherwise.

Q. DO THE GAINS PRODUCED BY INCENTIVE COMPENSATION RESULT IN AN ACCUMULATION OF BENEFITS AND COST SAVINGS THAT ACCRUE TO KENTUCKY POWER CUSTOMERS EACH YEAR?

A. Yes. The Company's STI and LTI compensation programs have been in place for more than two decades, and these programs have produced benefits that inured to customers in base rate cases over these many years. These benefits are generally the result of the high-performance culture that the Company's incentive compensation encourages. The accumulated value that has been produced over the more than two decades that these programs have been in place was reflected in the Company's cost of service in the test years for prior base rate cases and is reflected in the cost of service in this case. The decades of accumulated value produced by Incentive Compensation has inured to customers through lower rates in prior rate proceedings and any additional value it has created since the last base rate case will again inure to customers when the rates set in this case are effective. These benefits gradually accumulated over time and would likely diminish over time if incentive compensation were eliminated. Such 'back-sliding' would be detrimental to Kentucky Power customers.

Q. SHOULD IT BE EXPECTED THAT THE INCREMENTAL PRODUCTIVITY BENEFITS AND COST SAVINGS GENERATED BY INCENTIVE COMPENSATION WILL EXCEED ITS TOTAL (INCREMENTAL AND NON-INCREMENTAL) COST?

A. No. Although the Company's Incentive Compensation provides substantial benefits, as I have described, it is unreasonable to expect that the new incremental productivity benefits and cost savings generated each year will offset its cost. Such self-funding is not necessary for these costs to have been prudently incurred because the Company's Incentive Compensation is a component of a reasonable and market-competitive Total Compensation program, rather than a 'bonus' that is additional to such a program. Therefore, the Company's Incentive Compensation has no incremental cost above the cost of providing market competitive compensation through base pay alone, and it produces the substantial incremental benefits previously described. Therefore, the related expense is clearly a prudent and reasonable cost of doing business. Furthermore, maintaining incentive compensation prevents gradual backsliding on the productivity benefits that have accumulated because of Incentive Compensation over the many years it has been in place. Customers already benefit from the accumulated value and high-performance culture that Incentive Compensation has provided over the decades it has been in place. It is unlikely that Incentive Compensation will produce substantial additional value that would inure to shareholders during the period rates are in effect and any incremental value that is produced likely would be more than offset by above target incentive expense that would be borne by shareholders. Therefore, customers are the primary beneficiaries of the Company's Incentive Compensation. It is unreasonable and unsustainable for shareholders to bear a large portion of the cost of the target level of Incentive Compensation, as well as 100% of any above target expense, while customers receive 100% of the benefits Incentive Compensation has created over the decades it has been in place.

A. Short-Term Incentive (STI) Compensation

Q. HOW COMMON IS STI COMPENSATION IN THE UTILITY INDUSTRY?

A. The nearly universal prevalence of STI compensation for energy services industry positions clearly shows that, at a minimum, employers in this industry believe that using STI compensation is superior to its only alternative, which is providing market-competitive compensation through base pay alone. STI compensation is provided by the majority of employers to all positions and is nearly universally provided to higher-level positions both in the energy services industry and in U.S. industry in general. The compensation analyses contained in Exhibits ARC-2 through ARC-5 show that market median Total Compensation includes incentive compensation for 99% of the 301 positions with 3,268 incumbents included in these market compensation analyses. In addition, median target STI Compensation was at least 5% of base salary for positions at all base salary levels in the energy services industry, including positions with base salaries of less than $30,000[4]. This survey analysis is very robust, including 141 Energy Services Industry employers and 214,241 incumbent employees.

Q. DOES STI COMPENSATION PROVIDE ADDITIONAL SPECIFIC BENEFITS?

A. Yes. Kentucky Power's 2022 and 2023 STI compensation includes many goals and objectives that provide numerous benefits to customers. These specific benefits to customers provided by the goals in the 2023 Utility STI plan are:

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[4] Willis Towers Watson; 2022 Energy Services Middle Management, Professional and Support Survey Report — United States; Compensation Report; Base/Bonus/Target Bonus Summary Tables by Salary Range (Incumbent-Weighted) - Total Sample.

- Reducing and eliminating employee and contractor safety incidents and fatalities, which eliminates the impact of the avoided incidents on these employees and their families, colleagues, and communities, as well as the associated cost
- Improving NERC compliance, which better ensures reliability and reduces costs
- Increasing economic & business development in the communities we serve
- Increasing the value of Federal grants received, which obtains Federal Government incentives for projects in and for the communities we serve and spreads the Company's fixed costs over a larger base thereby reducing the fixed costs borne by utility customers
- Increasing the development of regulated renewable generation for customers' benefit
- Improving the reliability of our electric service
- Improving the workforce culture, which increasing employee engagement and leads to improved employees and company performance and reduces employee turnover related costs
- Improving workforce diversity, equity, and inclusion, which increases employee engagement and leads to better employees and company performance and expands the pool of candidates interested in AEP's positions, which improves time to fill vacant positions and reduces employee turnover related costs
- Improving supplier diversity, which benefits the communities we serve by fostering a more diverse and local supply chain with more representation of women, minorities, veteran, LGBT and disadvantaged businesses among our suppliers
- Implementing a labor strategy that improves our talent pipelines and develops strategic labor alliances, which better ensures a sufficient supply of employees are available for the work needed to provide service to customers
- Generating operating earnings and return on equity that provides sufficient returns to investors to ensure capital is available at reasonable costs to maintain and expand our electric system to meet the needs of our customers for stable and affordable electricity. This goal also encourages all employees to maintain financial discipline, which benefits customers by reducing the cost of service below what it would be otherwise
- Improving the customer service through improved power quality and reliability and improved customer service
- Improving wires reliability and reducing the impact of storms through improved forestry management
- Supporting the electrification of transportation and other large scale electrification initiatives, which helps meet costumers needs and spreads fixed costs over a larger base, thereby reducing the fixed costs paid by utility customers

- Fostering the completion of specific reliability work streams for Kentucky Power customers, inclusive of installing 900 protection devices on unfused taps, installing 375 additional switches for step restoration, removing 18,000 trees from outside the right of way, and replacing 1,200 cutouts that have reached the end of their service life prior to failure

Q. PLEASE DESCRIBE THE COMPANY'S STI PLANS.

A. All the Company's and other AEP affiliate employees, from hourly positions through executive management, except co-ops and interns, participate in the Company's STI program. The 2022 and 2023 STI target percentage for most physical, craft, and technical positions is 3% of eligible earnings, which includes base wages, overtime, and shift premiums. The STI targets for salaried positions vary by salary grade level. The STI targets for each salary grade are set at levels that provide Total Compensation that is within the market-competitive range and as close to the market median on average as possible for the positions assigned to each grade level. This approach is typical for U.S. industrial companies.

The AEPSC compensation team uses a standard plan design and template for all STI plans with separate plan documents, performance measures and communications for employees in each major AEP business unit and operating company. The overall performance score for each AEP business unit and operating company, including Kentucky Power's version of the Utilities plan, determines the award payout for that group from the available funding (described in the following question and answer below). Overall performance scores and award payouts can range from 0% to 200% of the target. AEPSC employees in centralized functions, such as human resources and IT, do not have separate STI performance measures and participate in STI compensation based on the average overall performance score for AEP's business units and operating companies.

Performance targets are established for STI measures at stretch but achievable levels to ensure that employees have a reasonable expectation that STI will pay out at or above the target level on average over multiple years. This expectation is foundational because, without it, many employees would not perceive their Total Compensation opportunity to be market-competitive and employee attrition and retention likely would increase to problematic levels. However, most participants understand that STI compensation is variable and may vary both above and below target from year to year but that it can reasonably be expected to meet or exceed the target level on average over longer periods. STI payouts have averaged 140.0% and 155.9% of target over the last 5 and 10 years, respectively.

Q. PLEASE DESCRIBE HOW STI COMPENSATION IS FUNDED.

A. For many years prior to 2023, except for 2020, a balanced scorecard of performance measures (Funding Measures) has been used for STI funding. The funding was changed for 2020 to 100% earnings to bolster financial stability at a time when the impact of COVID-19 was unknown, which benefited customers. A balanced scorecard was established for 2022 and 2023 with a mix of AEP Operating Earnings (60% for both 2022 and 2023), Safety and Compliance (12% for 2022 and 20% for 2023) and Strategic Initiatives (28% for 2022 and 20% for 2023) measures.

Q. WHAT IS THE PURPOSE OF THE FUNDING MECHANISM FOR STI COMPENSATION?

A. The funding mechanism ensures that AEP can afford employee incentive compensation while also meeting its commitments to other stakeholders, including Kentucky Power customers. It also ensures that STI compensation does not impair AEP financially, which helps avoid the increased costs that would create, such as increased borrowing costs that Kentucky Power customers would likely at least partially absorb if AEP were financially impaired even to a small extent. The importance of such a mechanism becomes apparent when utilities are in financial distress. For example, PG&E needed to take extraordinary measures to eliminate incentive compensation while they were in financial distress, a decision the California Consumer Counsel agreed with, because their STI did not have a funding mechanism that adjusted incentive payouts commensurate with the Company's financial performance. Anyone who has ever managed their living expenses within a budget knows that it is not sustainable and is detrimental to their financial wellbeing, as well as that of those they serve and support, to spend more than they can afford.

The funding mechanism also facilitates business unit and operating company goal setting by shifting the focus to ensuring a consistent degree of difficulty among AEP's business units and operating companies. The AEP Operating EPS component of the Funding Measures also sends a clear message to all employees that it is imperative for them to maintain financial discipline. This drives a relentless pursuit of efficiency and cost reduction that enables the Company to complete work at a lower cost than would otherwise be the case—which benefits customers.

Q. PLEASE DESCRIBE HOW STI COMPENSATION FUNDS ARE ALLOCATED.

A. Kentucky Power and every other AEP operating company and business unit have a separate set of operating measures (Operating Measures) that are used along with the Funding Measures and a normalizing function to determine STI payouts. A normalized score for each operating company and business unit is determined by dividing their weighted average Operating Measures score by the weighted average Operating Measures score for all AEP operating companies and business units. This results in a normalized average score of 1.0 or 100% of the target level. Each business unit and operating company score is then multiplied by the funding score, which results in a weighted average score for all AEP business units and operating companies that is equal to the funding score, which allocates exactly 100% of the available funding while maintaining score differentiation based on each groups performance. This results in scores and payouts for each business unit and operating company that reflect the group's performance as well as a total payout that is equal to the overall funding available.

Q. WHAT ARE THE KEY DRIVERS OF STI COMPENSATION FOR KENTUCKY POWER EMPLOYEES?

A. Most Kentucky Power employees participate in the AEP Utilities ICP (incentive compensation plan) for Kentucky Power employees. The key drivers of performance for this plan for 2022 and 2023 were five categories of Operating Measures (safety and compliance, workforce & culture, affordability, and operations) that comprised 80% of the 2020 Operating Measures for Kentucky Power, while financial performance

(Kentucky Power Net Income and ROE) made up the remaining 20% (see Exhibit ARC-6).

Some Kentucky Power employees also participated in the 2022 and 2023 STI plans for centralized staff, the Executive Council, Regulated Generation, and Energy Delivery. The centralized staff group ICP is based on the average score for all business units and operating companies and the Executive Council score is based solely on the funding measures without separate operating measures. Each of the other plans uses a balanced scorecard of Operating Measures and a balanced scorecard of funding measures. If Kentucky Power employees do not achieve their Operating Measure objectives, they would not be paid a significant STI award, irrespective of AEP's or Kentucky Power's financial performance.

Q. WHAT OTHER SPECIFIC BENEFITS DO THE FINANCIAL MEASURES IN THE STI COMPENSATION PROGRAM PROVIDE TO CUSTOMERS?

A. The financial STI performance measures focus employees on cost control, adherence to budget, and promoting the efficient use of financial resources, which is essential for providing reliable service at a reasonable cost to customers. Financial measures continuously emphasize the importance of maintaining financial discipline and directly encourage employees to spend conservatively, operate efficiently, and conserve resources. This has and will continue to directly benefit customers by reducing the Company's cost of service through cost savings that are passed on to customers in rates.

Financially based incentive compensation also reduces earnings volatility and bolsters the Company's financial stability. This reduces the Company's cost of capital and better ensures access to capital at reasonable rates, particularly during recessionary and other periods of weaker earnings, such as those caused by major storms, weak economic activity, and catastrophic events when capital may otherwise be overly expensive or inaccessible. Furthermore, ensuring that incentive compensation payments do not impair the Company financially reduces the risk of additional expense caused by such difficulties, which would be borne by Kentucky Power customers. These effects all reduce costs for Kentucky Power customers relative to what they would be without such STI compensation.

Q. WHAT OTHER SPECIFIC BENEFITS DOES STI PROVIDE?

A. In addition to enabling the Company to attract and retain the suitably skilled and qualified employees needed to provide service to customers efficiently, effectively, and safely, its benefits include:

- Communicating goals and performance towards them, which improves their visibility and encourages their achievement in accordance with the adage "what gets measured gets done."
- Aligning goals and employee efforts throughout the organization, which better ensures that adequate time, attention, and resources are provided for their achievement, employees are focused on achieving them and that everyone is pulling in the same direction towards their achievement.
- Rewarding employees for achievement of goals and objectives, which encourages employees to expend discretionary effort to achieve them and reinforces their positive behavior when they succeed.
- Enhancing the organization's culture and performance by giving all employees a personal stake in achieving these goals and objectives and thereby creating a shared purpose.
- Shifting a portion of compensation from a fixed to a variable expense that varies based on performance, which reduces earnings volatility, business risk, and borrowing costs.
- Creating a culture of high performance and cost consciousness.
- Reducing costs through increased productivity and a relentless pursuit of cost savings.

Q. IS THE COMPANY REQUESTING THE INCLUSION OF ALL TEST YEAR STI COMPENSATION IN ITS REVENUE REQUIREMENT IN THIS CASE?

A. No, the Company is requesting inclusion of only the lower target level of test year direct Kentucky Power Company STI expense and indirect Wheeling Power Company expense for Kentucky Power Company's ownership share of the Mitchell and Kammer generating plants, which is the market-competitive level, rather than the substantially larger per books expense.

Q. DOES FINANCIALLY BASED STI COMPENSATION BENEFIT CUSTOMERS?

A. Yes. I have shown that the Company's financially based STI benefits customers and serves their interests. The entire target level of STI compensation is a necessary cost of providing service to customers because it is a component of a market competitive Total Compensation package that is needed to attract and retain employees with the skills and experience needed to provide service to customers efficiently, effectively, and safely.

It is unreasonable and unsustainable for shareholders to bear a large portion of the cost of the target level of STI, which is a reasonable and necessary cost of providing service to customers, unless such expense is contrary to customers' interests, which I have shown herein it is not. It is also unreasonable and unsustainable for shareholders to pay the cost of performance improvements derived from STI compensation when those benefits, both current and accumulated, will and have inured to customers through this and previous rate case proceedings. It is unreasonable to expect that the new incremental benefits generated by employees due to STI compensation going forward, if any, will be sufficient to offset its full cost. In any event, such cost justification is unnecessary because STI compensation is a component of a market-competitive Total Compensation package that enables the Company to attract and retain suitable employees and all this compensation expense would be necessary if the Company only used base compensation to compensate employees. The accumulated cost savings that the Company's STI compensation has produced over the decades that it has been in place are reflected in Kentucky Power's test year cost of service. These savings will again be embedded in rates as they have been in prior rate case proceedings and will pass through to customers. There is no mechanism for these benefits to flow to shareholders. Disallowing recovery of these amounts requires shareholders to pay for a large portion of this cost without receiving any of the accumulated benefits and while also being required to pay for any incremental benefits that may accrue through above target incentive payouts of STI. Furthermore, maintaining financially based STI measures prevents backsliding on previously achieved cost-control and efficiency savings.

Given that customers already receiving the ongoing benefits of STI compensation and that it is unknown whether this program will provide any new incremental benefits going forward, beyond those provided by a market-competitive Total Compensation package, customers, not shareholders, are the primary beneficiaries of the Company's Incentive Compensation program. Excluding any portion of the target level of STI compensation from Kentucky Power's revenue requirement is not justified based on the evidence that I have provided herein.

Moreover, doing so would impede the Company's ability to earn the rate of return set by the Commission in this proceeding.

B. Long-Term Incentive (LTI) Compensation

Q. IS THE COMPANY REQUESTING THAT LTI COMPENSATION EXPENSE BE INCLUDED IN THE COST OF SERVICE IN THIS CASE?

A. Yes. The Company is requesting that the test year target level of $181,125 of LTI expense be included in its cost of service. This is the target level of direct Kentucky Power Company LTI compensation and indirect Wheeling Power Company LTI compensation for the Kentucky Power Company's share of the Mitchell and Kammer generating plants. The requested LTI compensation includes both performance shares and restricted stock units ("RSUs"), which are the two types of LTI compensation that the Company and other AEP affiliates utilize.

Q. PLEASE BRIEFLY DESCRIBE THE COMPANY'S LTI PROGRAM.

A. The Company's LTI compensation is managed by the AEPSC compensation team as part of an AEP systemwide LTI program for all AEP affiliates. It is similar to STI Compensation in that it too is an integral component of reasonable and market competitive Total Compensation for eligible employees. As previously stated, market competitive Total Compensation is necessary to attract and retain suitably skilled, experienced, and knowledgeable employees efficiently and effectively. As such, LTI compensation has no incremental cost above the cost of providing market competitive Total Compensation through Base Pay alone. LTI compensation also encourages decision making from a long-term perspective and fosters operational continuity by improving the long-term retention of participants.

Approximately 1,425 employees (about 8% of AEP employees) received an LTI award in the test year. Participation is generally provided to employees in positions that have responsibility for decisions that have a longer-term impact on operations and customers. Such employees often have historical and experiential knowledge of the Company's and AEPSC's practices and often assist in creating and implementing the vision of how the Company can best serve customers both now and in the future. LTI participants are often responsible for maintaining employee's focus on customers, making often-difficult resource allocation decisions, and driving customer experience improvements. Because of the value these employees provide, retaining them is particularly important to providing high quality service to customers at a reasonable cost. The LTI compensation program is designed to foster the retention of such participants.

The annual LTI awards granted during the test year were composed of 75% performance shares and 25% RSUs.

Q. PLEASE DESCRIBE PERFORMANCE SHARES.

A. Performance shares are generally similar in value to shares of AEP common stock, but participants must continue their AEP employment over a three-year period to earn a payout unless the participant retires, is severed, or dies. Otherwise, performance shares are forfeited upon employment termination. The number of performance shares that participants ultimately earn is tied to AEP's longer-term performance relative to pre-established performance measures. All performance shares granted during the test year have three performance measures:

- Three-year cumulative AEP operating earnings per share ("Operating EPS") measured relative to a Board-approved target (50% weight),
- Three-year AEP total shareholder return ("TSR") measured relative to a peer group of similar utility companies (40% weight), and
- Addition of carbon free generation capacity throughout the AEP system measured relative to a board approved target (10% weight).

Awards granted prior to 2020 had two performance measures, Operating EPS and TSR, (both as described above), which were equally weighted. As with the Company's STI, the maximum score for all LTI performance measures is 200% of target. These LTI measures help ensure that the AEP system companies keep pace with the rapidly changing business landscape and amplified societal expectations, while positioning itself for success in the future. Taken together, the STI and LTI measures balance the short-term and long-term interests of the Company and its customers.

Q. PLEASE DESCRIBE THE COMPANY'S RSUS.

A. RSUs (restricted stock units) provide the remaining 25% of the LTI value. RSUs are also generally similar in value to shares of AEP common stock. RSUs vest, subject to the participants' continued AEP employment, on three vesting dates over approximately a three-year period. RSUs are not tied to any performance measures (financial or otherwise) but are instead provided to foster employee retention over a longer period. Participants who remain continuously employed with AEP through an RSU vesting date receive an equal number of shares of AEP common stock as the number of RSUs that vest on such date. Otherwise, with certain exceptions such as severance due to position eliminations or a participant's death, RSUs are forfeited upon employment termination.

Q. IS LTI COMPENSATION A PREVALENT FORM OF COMPENSATION FOR THE UTILITY INDUSTRY?

A. Yes, it is highly prevalent. Nearly all publicly owned utility companies have similar LTI programs, as do nearly all public general industry companies. LTI compensation is a significant component of energy services industry total compensation for higher paid positions, providing a minimum of 20% of base salary at the median for all 131 organizations with 4,203 incumbents for which a sufficient sample was available for these positions.[5] Exhibit ARC-5 also shows that LTI compensation is a substantial component of market-competitive compensation for all the positions included in this analysis.

Q. WHAT ARE THE BENEFITS TO CUSTOMERS FROM THE COMPANY'S LTI COMPENSATION PROGRAM?

A. First and foremost, as with STI compensation, LTI compensation is an integral component of the market-competitive total compensation package used to attract and retain suitable employees necessary to provide service to customers efficiently and effectively. LTI compensation also provides a retention incentive to participants, which benefits customers by improving the retention of employees with greater company experience in roles that have long-term decision-making responsibility, which improves the continuity of the Company's operations and management.

The addition of carbon free generation measure benefits customers and the communities the Company serves by encouraging the development of resources that

[5] Willis Towers Watson, 2022 Energy Services Executive Survey Report — United States, Compensation Report, Long-Term Incentive Annualized Value Table (Incumbent-Weighted).

are expected to save customers money over a longer-term period and provide other benefits. This has the added benefit of improving perceptions of the Company in the eyes of its customers, its investors, the public, and potential recruits, all of which may lead to reduced costs for customers as the result of improved customer interactions and increased interest from investors and potential recruits.

Tying a portion of management compensation to long-term measures of financial performance, specifically the EPS and TSR measures used in the performance share awards, encourages better long-term decision making and financial discipline, which benefits customers by encouraging cost control. Customers benefit from more efficient, effective, and consistent operations; more skilled, experienced, knowledgeable, and stable employees in management and other leadership positions; better long-term decision-making; and stronger financial discipline. All these factors contribute to lower costs for customers.

Maintaining long-term financial discipline is imperative, particularly given the long-term nature of the assets that comprise the Company's electric system. The EPS and TSR performance share measures communicate this imperative and strongly encourage its pursuit, which promotes expense control, efficient operations, and conservation of resources. This directly benefits customers by reducing the Company's cost of service and rates compared to what they would otherwise be.

As with STI compensation, customers are receiving and will continue to receive benefits from the suitably skilled and experienced employees who were attracted and retained in their work from past above target LTI payouts as well as from the accumulated value of incentivized achievements over the many years the LTI program has been in place.

Q. ARE THERE ANY INDIRECT COSTS TO CUSTOMERS OF THE LTI PROGRAM?

A. No. Capping LTI measures at maximum score, setting stretch but achievable targets, and providing a balance of short-term and long-term Incentive Compensation, ensures that participants are not encouraged to pursue financial objectives at the expense of other important objectives, such as customer service and safety. The short-term and long-term performance measures are designed to balance each other to ensure that short-term performance is not achieved at the expense of long-term objectives. Likewise, financial short-term and long-term performance objectives are balanced by operational and other objectives as part of a "balanced scorecard" to assure that financial objectives are not achieved at the expense of other important objectives. This balanced approach mitigates the potential for LTI compensation to encourage behaviors that would be counter to customers' interests. Therefore, LTI compensation does not give rise to any indirect costs that would offset the substantial benefits it provides to customers.

Q. DO THE TOTAL BENEFITS OF THE LTI COMPENSATION EXCEED ITS COST TO KENTUCKY POWER CUSTOMERS?

A. Yes. As with STI compensation, the request target level of LTI compensation is provided as part and parcel of a market-competitive Total Compensation package and, therefore, does not have any incremental cost to customers, beyond the cost of providing market competitive Total Compensation through other types of compensation. By encouraging participant retention, which improves operational continuity and performance, it reduces the cost of service for customers. It also reduces the cost customers bear by encouraging long-term financial discipline, among the other benefits previously mentioned. With significant accumulated benefits, a potential for new incremental benefits, and no incremental cost, the benefits of the LTI program clearly exceed its cost to customers.

Q. IS IT REASONABLE AND NECESSARY TO INCLUDE LTI COMPENSATION IN THE COMPANY'S COST OF SERVICE FOR RATE MAKING PURPOSES?

A. Yes. LTI compensation has been clearly shown to be a reasonable, customary, and prudent cost of doing business that provides substantial overall net benefits to customers because, among other reasons, it:

(a) Does not have any incremental cost above the cost of providing market-competitive compensation through other forms of pay,

(b) Improves participant retention and, consequently, management and operational continuity,

(c) Encourages appropriate consideration of longer-term factors in decision making, and it

(d) Improves operating effectiveness and cost control.

As with STI compensation, it is also unreasonable and unsustainable for shareholders to pay the cost of performance improvements derived from LTI compensation when those benefits, both current and accumulated, will and have inured to customers through this and previous rate case proceedings. It is unreasonable to expect that the new incremental benefits generated by employees due to LTI compensation going forward, if any, will be sufficient to offset its full cost. As with

STI compensation, such cost justification is unnecessary when LTI compensation is a component of a market-competitive Total Compensation package that is necessary for the attraction and retention of suitable employees. Furthermore, there is not any mechanism for the accumulated benefits of LTI compensation to flow to shareholders and new incremental benefits that accrue during the period the rates set in this case are in place, if any, would be partially offset by above target incentive expense that would be entirely borne by shareholders before these new incremental benefits also inure to customers in the next base rate case.

Furthermore, the 25% portion of LTI provided in the form of RSUs are not tied to any performance measures whatsoever, financial, or otherwise. The addition of the carbon free generation measure (10% weight * 75% performance shares = 7.5% of total LTI) is not a financial measure.

Customers are receiving and will continue to receive benefits from the suitably skilled and experienced employees who are attracted, retained, and better engaged from the larger actual level of LTI compensation awarded, as well as from the accumulated value of incentivized achievements over the many years the LTI program has been in place. All the accumulated benefits of LTI compensation have or will inure to customers during this and prior base rate case proceedings and any new incremental benefits will be partially offset by above target incentive payouts before such benefits fully inure to customers in the next base rate case. Furthermore, maintaining LTI compensation prevents backsliding on previously achieved cost-control and efficiency savings. Therefore, it would be just and reasonable to include the requested target level of LTI compensation in Kentucky Power’s cost of service for ratemaking purposes.

IX. EMPLOYEE BENEFITS

Q. WHAT ARE THE OBJECTIVES OF THE BENEFIT PLANS OFFERED TO THE COMPANY'S EMPLOYEES.

A. The benefit plans offered to employees are designed to be an important component of their Total Compensation and benefits package. Specifically, the objectives are to provide employee benefit offerings that:

- Support the attraction and retention of employees with the skills and experience needed to provide service to customers efficiently and effectively
- Protect employees and their families from severe financial hardship due to catastrophic life events
- Provide a variety of benefit offerings that add value and meet the diverse needs of the workforce
- Influence desired participant behaviors by, for example, providing incentives to encourage employees to obtain preventive care services under the medical plan and minimizing inefficient consumption of medical services
- Ensure the total cost of benefit programs remains affordable and sustainable for all the Company's stakeholders, including customers
- Maintain compliance with applicable federal and state laws

Q. PLEASE DESCRIBE AEP'S EMPLOYEE BENEFIT PROGRAMS.

A. The AEPSC benefits team, which is a function within AEP's Human Resources department, in partnership with third party advisors and administrators, designs and administers employee benefits for all AEP affiliates and employees. Through a combination of employer and employee contributions, AEP provides employee benefits for nearly all full-time employees and, at an increased cost, part-time employees and participation may extend to employee's families and certain retirees in some instances. Employee benefits include medical, wellness, dental, vision, sick pay, long-term disability ("LTD"), life insurance, accidental death and dismemberment insurance, retirement pension, retirement savings (401k), vacation, personal days off and holidays. A summary of employee benefit programs is provided as Exhibit ARC-7. Employee benefits are a critical component of the Company's ability to attract and retain suitable employees.

Many of AEP's benefit programs; including the medical, dental, and LTD programs; are self-insured using a Voluntary Employee Beneficiary Association trust, as opposed to a fully insured arrangement in which premiums are paid to an insurance company for coverage. Employee contributions, as well as monthly contributions from the Company and other AEP Affiliates for each employee, are deposited to the trust and used to fund the actual claims and vendor administration expenses as allowed by law. A summary of each healthcare benefit plans is outlined in Exhibit ARC-8.

Q. WHAT ACTIONS HAVE BEEN TAKEN TO CONTROL THE COST OF EMPLOYEE BENEFITS?

A. The AEP benefits team continuously reviews employee benefits to contain costs, while providing benefits that are market competitive and sufficient to attract and retain suitable employees. This results in benefit design and cost changes nearly every year. AEP continues to build on the 2016 implementation of all consumer-directed medical plans. In 2017, to secure efficiency savings and to enhance the employee experience, AEP changed behavioral health service vendors to the same carrier that provides medical benefits. In 2019, AEP implemented diabetes prevention and second opinion programs. In the pharmacy space, AEP implemented a retail 90-day supply prescription drug program. In 2023 the Pharmacy Benefit Manager was changed, and the traditional health carrier service model was replaced with an advocacy service model to help employees better navigate their healthcare journeys, connect them with resources and assist them with locating cost-effective, high-quality providers. Each of these enhancements were designed to provide an improved customer experience for the employees, reduce potentially preventable disease and/or reduce costs.

AEP routinely reviews and evaluates benefit outsourcing contracts to ensure they are market competitive. AEP, in consultation with benefit consultants Aon and Willis Towers Watson, solicit and evaluate proposals to ensure they meet performance expectations, are competitively priced and deliver value added benefits to AEP employees.

Q. WHAT WERE KENTUCKY POWER'S CONTRIBUTIONS RELATED TO THE EMPLOYEE BENEFIT PLANS DURING THE TEST YEAR?

A. Kentucky Power Company's calculated net employee related group benefit cost for the test year, for medical, dental, life insurance, accidental death and disability, long-term disability, and retirement savings (401k) plan were $5,295,849. Retirement (pension) plan and other post-employment benefits are provided and discussed by Company Witness Whitney. Exhibit ARC-9 details the employer contributions made by Kentucky Power by benefit plan.

Q. HOW DOES AEP DETERMINE THAT THE EMPLOYEE BENEFIT PROGRAMS THAT IT OFFERS ARE REASONABLE AND NECESSARY?

A. AEP targets the median of similarly sized companies from the utility industry when benchmarking its employee benefits to ensure that the costs for AEP affiliates are not out of alignment with those of other utilities. AEP also considers non-utility companies as a secondary benchmark for employee benefits, to better ensure that trends and practices from other industries are also considered. Such studies are conducted annually, and adjustments are made as needed.

Q. HOW ARE BENEFIT VENDORS SELECTED?

A. As we approach each contract renewal, the vendor is asked for a formal proposal to cover the renewal period. Proposals are reviewed internally and in most cases by independent third-party consultants, such as Aon and Willis Towers Watson. These experts help set the performance standards and determine if the contract proposal is market competitive. If the proposal does not meet our expectations, is not competitively priced, or it is believed that further improvements are available, requests for proposals are sent to qualified vendors and a final vendor is selected through a competitive bid process.

Q. PLEASE DESCRIBE HOW THE VALUE OF AEP'S BENEFIT PROGRAM IS ASSESSED.

A. As previously mentioned, AEP utilizes the services of Aon, specifically Aon's Benefit Index Report, to help determine the reasonableness of the benefits offered to all AEP affiliate employees. The Benefit Index compares information on individual benefit programs to other similarly sized utility employers. The Benefit Index assigns a value to the benefits provided by participating companies based on the level of benefits provided and the type of program offered. The Benefit Index's comparative analysis shows the relative actuarial value of AEP system benefits as a percentage of the average actuarial value of benefits provided by similar employers.

Q. WHAT DO THESE METRICS AND VALUE COMPARISONS SHOW?

A. These metrics show that the employee benefits offered to AEP system employees provides a level of value to employees that is at or near the midpoint of those offered by peer companies, and, therefore, that these benefits are both reasonable and competitive with other similarly sized utility industry employers. It is a best practice in compensation and benefits design to rely on comparisons to similar employers, such as the survey data included in my exhibits, to gauge the reasonableness of employee compensation and benefit plans. These exhibits support the reasonableness of AEP's benefit plan design and value of our overall benefits program as compared to other non-affiliated utility employers. This better enables AEP to attract and retain qualified and suitable employees, which is essential to the efficient and effective provision of our services to customers.

Q. HOW DO THE AEP BENEFITS TEAM MONITOR AND MAINTAIN THE REASONABLENESS AND COMPETITIVENESS OF BENEFIT COSTS?

A. With the assistance of benefits survey information and outside advisors, the benefits team annually reviews the reasonableness and competitiveness of benefit plan costs with senior management and continually considers potential changes that might improve the efficiency and effectiveness of these benefits for participants. This is done with the use of survey data and best practice information from third-party employee benefits consultants. For health and welfare benefits a Benefit Index survey and analysis from Aon is used to provide these comparisons. This study found that the value of AEP's 2023 health and welfare benefits was 100.7 compared to the 100.0 for the average of the comparator group (see CONFIDENTIAL Exhibit ARC-10, page 4).

This analysis also found that the overall value of all AEP 2023 benefits was near the average with value of 100.4, which was between 6th and 7th place out of 11 utility industry survey participants, excluding AEP. CONFIDENTIAL Exhibit ARC-11 illustrates that AEP's medical costs are 11% more efficient than the industry translating to savings of nearly $32.4 million dollars as compared to the benchmark.

X. CONCLUSION

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. I have demonstrated that the total employee compensation that Kentucky Power seeks to include in its cost of service for ratemaking purposes is fair, just, and reasonable, and that it provides benefits to customers. I have shown that employee compensation is within a reasonable market competitive range and that market competitive compensation is required to attract and retain the knowledgeable, experienced, and qualified employees needed to provide reliable electric services to customers safely, efficiently, and effectively. I have also demonstrated that the Company's Incentive Compensation is designed to minimize overall expenses, which reduces the cost of service to customers. The compensation the Company provides, inclusive of Base Pay, STI and, for some positions, LTI compensation is a reasonable, necessary, and prudent cost of providing service to customers and I recommend the requests levels of Incentive Compensation be included in Kentucky Power's cost of service for all positions.

I have also demonstrated that the cost of the Company's employee benefits is reasonable and market competitive in total and should also be included in Kentucky Power's cost of service.

Q. DOES THIS CONCLUDE YOUR TESTIMONY.

A. Yes, it does.

VERIFICATION

The undersigned, Andrew R. Carlin, being duly sworn, deposes and says he is the Director of Compensation and Executive Benefits, for American Electric Power Service Corporation, that he has personal knowledge of the matters set forth in the foregoing testimony and the information contained therein is true and correct to the best of his information, knowledge, and belief after reasonable inquiry.

Andrew R. Carlin

Andrew R. Carlin

Commonwealth of Kentucky	)	
	)	Case No. 2023-00159
County of Boyd	)	

Subscribed and sworn to before me, a Notary Public in and before said County and State, by Andrew R. Carlin, on June 22, 2023.

Scott E. Bishop

Notary Public

SCOTT E. BISHOP
Notary Public
Commonwealth of Kentucky
Commission Number KYNP 32110
My Commission Expires Jun 24, 2025

My Commission Expires June 24, 2025

Notary ID Number KYNP 32110

Surveys Completed and Used for Compensation Comparisons

Willis Towers Watson U.S. Compensation Data Bank (CDB):

2022 Energy Services Industry - Executive Compensation Survey Report

2022 Energy Services Industry - Middle Management, Professional & Support Compensation Survey Report

2022 General Industry - Executive Compensation Survey Report

2022 General Industry - Middle Management, Professional and Support Compensation Survey Report

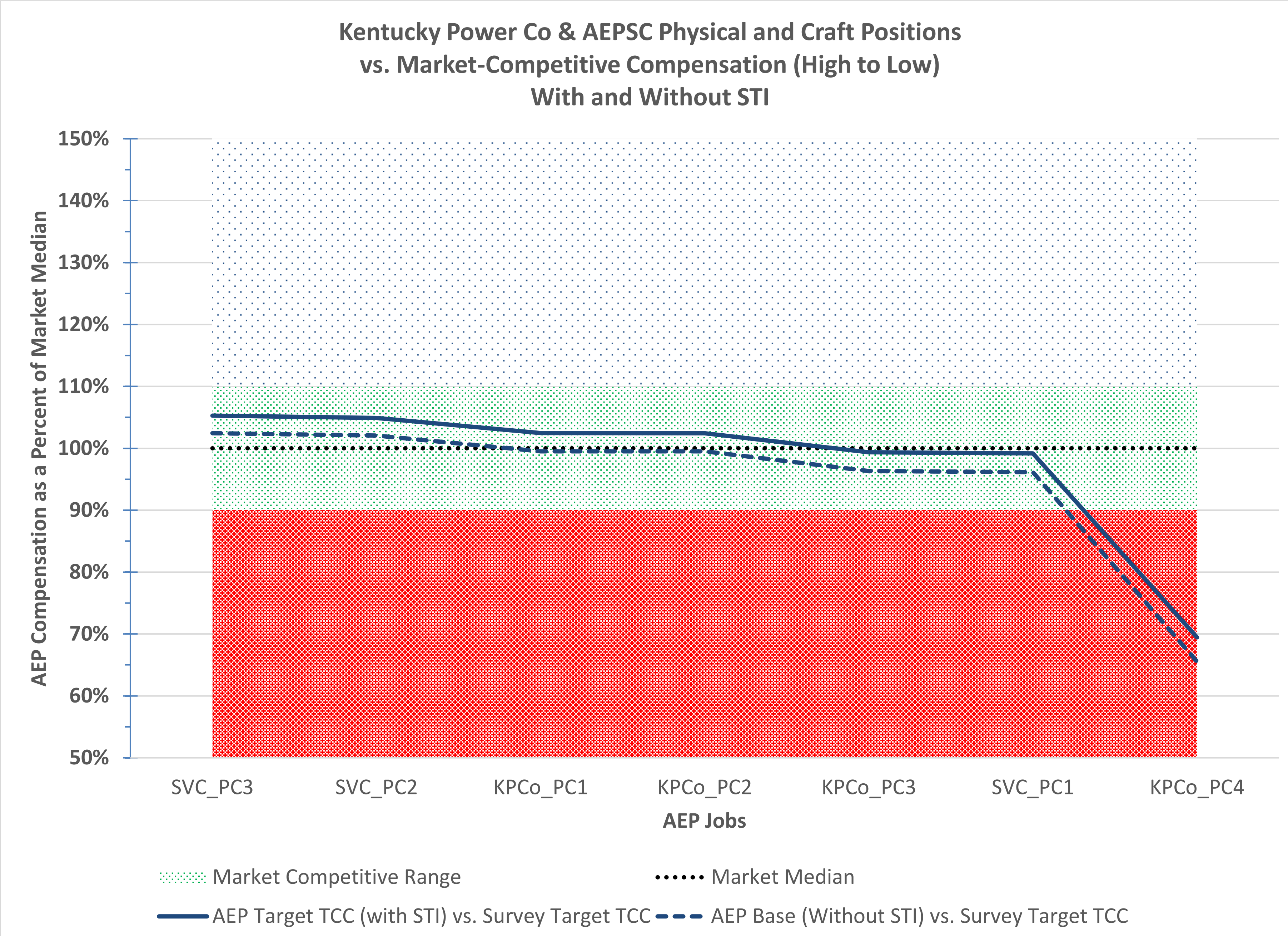
2022 Custom AEP Peer Group - Executive Compensation Surveys

2022 Custom AEP Broad Peer Group - Executive Compensation Surveys

Kentucky Power Co: Target TCC for Physical & Craft Positions vs. Market Median Total Sample Survey Data

						WTW Energy Service Mid-Mgmt, Prof & Support 2022			% Difference	
AEP Job	KPCo Employees	Avg Base[1]	Target Annual Incentive[2]	Target TCC		Base[3]	Target Incentive	Target TCC	AEP Target TCC vs. Survey Target TCC	AEP Base vs. Survey Target TCC
KPCo										
KPCo_PC1	30	$98,290	$2,949	$101,239		$96,611	$2,150	$98,761	2.4%	-0.5%
KPCo_PC2	2	$98,259	$2,948	$101,207		$96,611	$2,150	$98,761	2.4%	-0.5%
KPCo_PC3	5	$97,420	$2,923	$100,343		$98,467	$2,526	$100,993	-0.6%	-3.7%
KPCo_PC4	9	$68,069	$2,042	$70,111		$86,998	$4,527	$91,525	-30.5%	-34.5%
KPCo Count	**4**									
KPCo Incumbents	**46**									
AEP SERVICE CORP										
SVC_PC1	8	$101,427	$3,043	$104,470		$97,872	$7,479	$105,351	-0.8%	-3.9%
SVC_PC2	6	$100,831	$3,025	$103,856		$96,611	$2,150	$98,761	4.9%	2.1%
SVC_PC3	3	$107,248	$3,217	$110,466		$101,589	$3,048	$104,637	5.3%	2.4%
AEPSC Count	**3**									
AEPSC Incumbents	**17**									
								Average	**-2.4%**	**-5.5%**
TOTAL JOB COUNT		**7**						% of Jobs Above Market Competitive Range[4]	0.0%	0.0%
TOTAL INCUMBENT COUNT		**63**						% of Jobs Below Market Competitive Range[4]	14.3%	14.3%

Notes
(1) As of March 31, 2023
(2) Target payout is 3 percent of base earnings for all physical and craft jobs
(3) Annualized from April 1, 2022 to March 31, 2023 @ 3.0% salary growth rate
(4) A market competitive range of +/- 10 percent has been used for all physical and craft positions

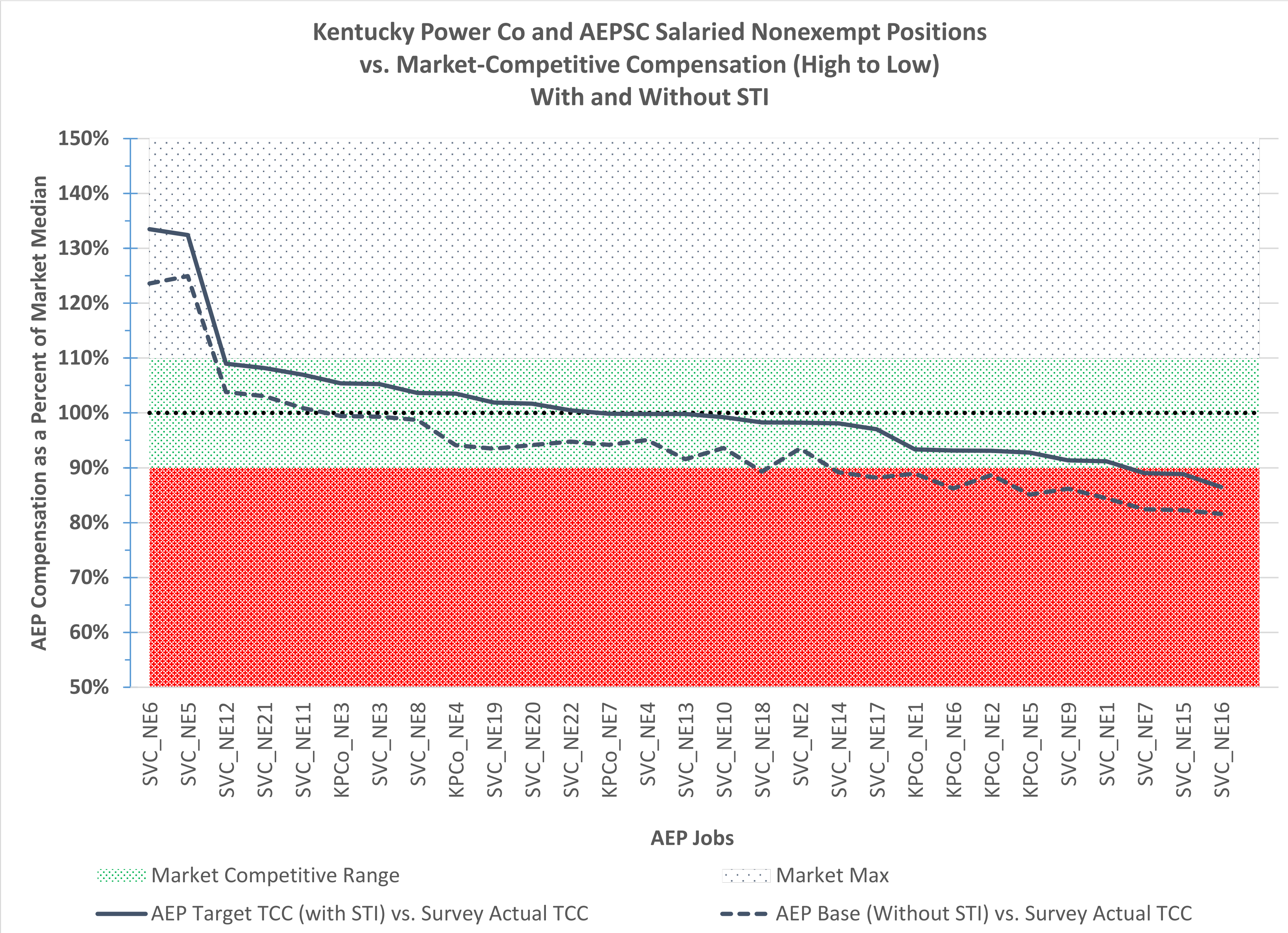

Kentucky Power Co & AEPSC Physical and Craft Positions
vs. Market-Competitive Compensation (High to Low)
With and Without STI
AEP Compensation as a Percent of Market Median
150%
140%
130%
120%
110%
100%
90%
80%
70%
60%
50%
SVC_PC3
SVC_PC2
KPCo_PC1
KPCo_PC2
KPCo_PC3
SVC_PC1
KPCo_PC4
AEP Jobs
Market Competitive Range
Market Median
AEP Target TCC (with STI) vs. Survey Target TCC
AEP Base (Without STI) vs. Survey Target TCC

AEP Job	AEP Target TCC (with STI) vs. Survey Target TCC	AEP Base (Without STI) vs. Survey Target TCC	Below Market	Market Median	Market Competitive Range	Above Market
SVC_PC3	105.3%	102.4%	90.0%	100.0%	20.0%	40.0%
SVC_PC2	104.9%	102.1%	90.0%	100.0%	20.0%	40.0%
KPCo_PC1	102.4%	99.5%	90.0%	100.0%	20.0%	40.0%
KPCo_PC2	102.4%	99.5%	90.0%	100.0%	20.0%	40.0%
KPCo_PC3	99.4%	96.3%	90.0%	100.0%	20.0%	40.0%
SVC_PC1	99.2%	96.1%	90.0%	100.0%	20.0%	40.0%
KPCo_PC4	69.5%	65.5%	90.0%	100.0%	20.0%	40.0%

Kentucky Power Co: Target TCC for Nonexempt Positions vs. Market Median Survey Data

		AEP Incumbent Data			Survey Results[1]			% Difference	
Rate case job identifier	Employee Count	Avg Base	Target Incentive (2)	Target TCC	Base	Target Incentive	Target TCC	Target TCC vs Survey Target TCC	Base vs Survey Target TCC
KPCo									
KPCo_NE1	6	$39,074	$1,954	$41,028	$43,831	$108	$43,939	-6.6%	-11.1%
KPCo_NE2	3	$43,829	$2,191	$46,020	$48,933	$495	$49,428	-6.9%	-11.3%
KPCo_NE3	7	$58,863	$3,532	$62,395	$58,943	$259	$59,202	5.4%	-0.6%
KPCo_NE4	19	$106,342	$10,634	$116,977	$106,107	$6,903	$113,010	3.5%	-5.9%
KPCo_NE5	7	$71,355	$6,422	$77,777	$79,730	$4,091	$83,821	-7.2%	-14.9%
KPCo_NE6	7	$61,554	$4,924	$66,478	$67,260	$4,121	$71,381	-6.9%	-13.8%
KPCo_NE7	5	$54,930	$3,296	$58,226	$55,970	$2,349	$58,319	-0.2%	-5.8%
KPCo Count	7								
KPCo Incumbents	54								
AEP SERVICE CORP									
SVC_NE1	5	$63,275	$5,062	$68,337	$70,254	$4,684	$74,938	-8.8%	-15.6%
SVC_NE2	18	$46,231	$2,312	$48,543	$48,933	$495	$49,428	-1.8%	-6.5%
SVC_NE3	63	$58,794	$3,528	$62,321	$58,943	$259	$59,202	5.3%	-0.7%
SVC_NE4	4	$38,852	$1,943	$40,795	$40,051	$823	$40,874	-0.2%	-4.9%
SVC_NE5	3	$57,304	$3,438	$60,743	$45,866	$0	$45,866	32.4%	24.9%
SVC_NE6	3	$68,590	$5,487	$74,077	$55,494	$0	$55,494	33.5%	23.6%
SVC_NE7	3	$68,269	$5,462	$73,731	$80,818	$2,004	$82,822	-11.0%	-17.6%
SVC_NE8	216	$47,757	$2,388	$50,145	$47,362	$1,012	$48,374	3.7%	-1.3%
SVC_NE9	10	$52,165	$3,130	$55,295	$57,960	$2,564	$60,524	-8.6%	-13.8%
SVC_NE10	5	$55,073	$3,304	$58,378	$58,455	$387	$58,842	-0.8%	-6.4%
SVC_NE11	7	$58,979	$3,539	$62,518	$56,705	$1,746	$58,451	7.0%	0.9%
SVC_NE12	4	$46,871	$2,344	$49,215	$45,137	$20	$45,157	9.0%	3.8%
SVC_NE13	4	$76,398	$6,876	$83,274	$78,808	$4,630	$83,438	-0.2%	-8.4%
SVC_NE14	72	$94,432	$9,443	$103,875	$98,325	$7,560	$105,885	-1.9%	-10.8%
SVC_NE15	36	$68,973	$5,518	$74,491	$79,730	$4,091	$83,821	-11.1%	-17.7%
SVC_NE16	23	$58,243	$3,495	$61,738	$67,260	$4,121	$71,381	-13.5%	-18.4%
SVC_NE17	4	$93,370	$9,337	$102,707	$98,325	$7,560	$105,885	-3.0%	-11.8%
SVC_NE18	10	$108,623	$10,862	$119,486	$113,660	$7,956	$121,616	-1.8%	-10.7%
SVC_NE19	8	$78,343	$7,051	$85,393	$79,730	$4,091	$83,821	1.9%	-6.5%
SVC_NE20	5	$67,212	$5,377	$72,589	$67,260	$4,121	$71,381	1.7%	-5.8%
SVC_NE21	3	$53,313	$2,666	$55,979	$51,655	$85	$51,740	8.2%	3.0%
SVC_NE22	3	$60,333	$3,620	$63,953	$63,211	$448	$63,659	0.5%	-5.2%
AEPSC Job Count	22								
AEPSC Incumbent Count	509						**AVERAGE**	**0.7%**	**-5.8%**
TOTAL JOB COUNT	**29**				% of Jobs Above Market Competitive Range[3]			7%	7%
TOTAL INCUMBENT Count	**563**				% of Jobs Below Market Competitive Range[3]			10%	41%

Notes:
(1) Survey Data from April 2022 Towers Watson Energy Services Middle Management, Professional & Support Survey and Towers Watson General Industry Middle Management Professional & Support Survey, aged to March 31, 2023 at 4% annual rate.
(2) Reflects annual target incentive.
(3) A market competitive range of +/- 10 percent has been used for these salaried nonexempt positions


Kentucky Power Co and AEPSC Salaried Nonexempt Positions
vs. Market-Competitive Compensation (High to Low)
With and Without STI
AEP Compensation as a Percent of Market Median
150%
140%
130%
120%
110%
100%
90%
80%
70%
60%
50%
SVC_NE6
SVC_NE5
SVC_NE12
SVC_NE21
SVC_NE11
KPCo_NE3
SVC_NE3
SVC_NE8
KPCo_NE4
SVC_NE19
SVC_NE20
SVC_NE22
KPCo_NE7
SVC_NE4
SVC_NE13
SVC_NE10
SVC_NE18
SVC_NE2
SVC_NE14
SVC_NE17
KPCo_NE1
KPCo_NE6
KPCo_NE2
KPCo_NE5
SVC_NE9
SVC_NE1
SVC_NE7
SVC_NE15
SVC_NE16
AEP Jobs
Market Competitive Range
Market Max
AEP Target TCC (with STI) vs. Survey Actual TCC
AEP Base (Without STI) vs. Survey Actual TCC

AEP Job	AEP Target TCC (with STI) vs. Survey Actual TCC	AEP Base (Without STI) vs. Survey Actual TCC	Market Low	Market Median Compensation	Market Competitive Range	Market Max
SVC_NE6	133.5%	123.6%	90.0%	100.0%	20.0%	40.0%
SVC_NE5	132.4%	124.9%	90.0%	100.0%	20.0%	40.0%
SVC_NE12	109.0%	103.8%	90.0%	100.0%	20.0%	40.0%
SVC_NE21	108.2%	103.0%	90.0%	100.0%	20.0%	40.0%
SVC_NE11	107.0%	100.9%	90.0%	100.0%	20.0%	40.0%
KPCo_NE3	105.4%	99.4%	90.0%	100.0%	20.0%	40.0%
SVC_NE3	105.3%	99.3%	90.0%	100.0%	20.0%	40.0%
SVC_NE8	103.7%	98.7%	90.0%	100.0%	20.0%	40.0%
KPCo_NE4	103.5%	94.1%	90.0%	100.0%	20.0%	40.0%
SVC_NE19	101.9%	93.5%	90.0%	100.0%	20.0%	40.0%
SVC_NE20	101.7%	94.2%	90.0%	100.0%	20.0%	40.0%
SVC_NE22	100.5%	94.8%	90.0%	100.0%	20.0%	40.0%
KPCo_NE7	99.8%	94.2%	90.0%	100.0%	20.0%	40.0%
SVC_NE4	99.8%	95.1%	90.0%	100.0%	20.0%	40.0%
SVC_NE13	99.8%	91.6%	90.0%	100.0%	20.0%	40.0%
SVC_NE10	99.2%	93.6%	90.0%	100.0%	20.0%	40.0%
SVC_NE18	98.2%	89.3%	90.0%	100.0%	20.0%	40.0%
SVC_NE2	98.2%	93.5%	90.0%	100.0%	20.0%	40.0%
SVC_NE14	98.1%	89.2%	90.0%	100.0%	20.0%	40.0%
SVC_NE17	97.0%	88.2%	90.0%	100.0%	20.0%	40.0%
KPCo_NE1	93.4%	88.9%	90.0%	100.0%	20.0%	40.0%
KPCo_NE6	93.1%	86.2%	90.0%	100.0%	20.0%	40.0%
KPCo_NE2	93.1%	88.7%	90.0%	100.0%	20.0%	40.0%
KPCo_NE5	92.8%	85.1%	90.0%	100.0%	20.0%	40.0%
SVC_NE9	91.4%	86.2%	90.0%	100.0%	20.0%	40.0%
SVC_NE1	91.2%	84.4%	90.0%	100.0%	20.0%	40.0%
SVC_NE7	89.0%	82.4%	90.0%	100.0%	20.0%	40.0%
SVC_NE15	88.9%	82.3%	90.0%	100.0%	20.0%	40.0%
SVC_NE16	86.5%	81.6%	90.0%	100.0%	20.0%	40.0%
			90.0%	100.0%	20.0%	40.0%

Kentucky Power Co: Target TCC for Exempt Positions vs. Market Median Survey Data

		AEP Incumbent Data			Survey Results[1]			% Difference	
Rate case job identifier	Employee Count	Avg Base	Target Incentive (2)	Target TCC	Base	Target Incentive	Target TCC	Target TCC vs Survey Target TCC	Base vs Survey Target TCC
KPCo									
KPCo_EX1	3	$115,922	$11,592	$127,514	$123,863	$14,090	$137,953	-7.57%	-15.97%
KPCo_EX2	3	$130,257	$19,539	$149,795	$119,025	$7,902	$126,927	18.02%	2.62%
KPCo_EX3	4	$65,357	$5,229	$70,586	$75,575	$5,849	$81,424	-13.31%	-19.73%
KPCo_EX4	6	$97,578	$9,758	$107,335	$107,330	$10,049	$117,379	-8.56%	-16.87%
KPCo_EX5	3	$138,057	$27,611	$165,668	$163,055	$32,405	$195,460	-15.24%	-29.37%
KPCo_EX6	3	$97,132	$9,713	$106,845	$107,691	$10,642	$118,333	-9.71%	-17.92%
KPCo_EX7	3	$95,645	$9,565	$105,210	$107,691	$10,642	$118,333	-11.09%	-19.17%
KPCo_EX8	3	$83,208	$7,489	$90,697	$85,952	$5,887	$91,839	-1.24%	-9.40%
KPCo_EX9	3	$125,500	$18,825	$144,325	$118,967	$12,548	$131,515	9.74%	-4.57%
KPCo Count	9								
KPCo Incumbents	40				KPCO AVERAGE			-4.3%	-14.5%
AEP SERVICE CORP									
SVC_E1	22	$81,671	$7,350	$89,021	$89,935	$3,243	$93,178	-4.46%	-12.35%
SVC_E2	4	$77,214	$6,177	$83,391	$78,072	$2,969	$81,041	2.90%	-4.72%
SVC_E3	45	$109,286	$10,929	$120,215	$113,652	$5,245	$118,897	1.11%	-8.08%
SVC_E4	121	$82,592	$7,433	$90,025	$89,935	$3,243	$93,178	-3.38%	-11.36%
SVC_E5	78	$74,320	$5,946	$80,265	$76,073	$5,121	$81,194	-1.14%	-8.47%
SVC_E6	113	$131,188	$19,678	$150,867	$141,863	$9,040	$150,903	-0.02%	-13.06%
SVC_E7	206	$111,138	$11,114	$122,252	$113,652	$5,245	$118,897	2.82%	-6.53%
SVC_E8	47	$153,425	$30,685	$184,110	$173,337	$16,561	$189,898	-3.05%	-19.21%
SVC_E9	3	$123,512	$18,527	$142,039	$142,072	$104	$142,176	-0.10%	-13.13%
SVC_E10	6	$102,471	$10,247	$112,718	$109,642	$4,208	$113,850	-0.99%	-9.99%
SVC_E11	3	$75,887	$6,830	$82,717	$72,450	$4,513	$76,963	7.48%	-1.40%
SVC_E12	38	$104,381	$10,438	$114,819	$117,723	$9,705	$127,428	-9.89%	-18.09%
SVC_E13	6	$155,646	$31,129	$186,775	$170,775	$34,155	$204,930	-8.86%	-24.05%
SVC_E14	20	$71,965	$5,757	$77,722	$64,141	$1,024	$65,165	19.27%	10.44%
SVC_E15	3	$87,567	$7,881	$95,448	$75,240	$958	$76,198	25.26%	14.92%
SVC_E16	19	$93,288	$9,329	$102,617	$92,633	$4,797	$97,430	5.32%	-4.25%
SVC_E17	11	$105,287	$10,529	$115,815	$94,418	$3,907	$98,325	17.79%	7.08%
SVC_E18	3	$138,767	$27,753	$166,520	$144,122	$30,745	$174,867	-4.77%	-20.64%
SVC_E19	3	$88,703	$8,870	$97,573	$93,917	$4,408	$98,325	-0.77%	-9.79%
SVC_E20	4	$175,720	$43,930	$219,650	$176,597	$35,319	$211,916	3.65%	-17.08%
SVC_E21	7	$113,492	$11,349	$124,841	$114,283	$4,742	$119,025	4.89%	-4.65%
SVC_E22	4	$89,527	$8,953	$98,479	$89,010	$7,139	$96,149	2.42%	-6.89%
SVC_E23	5	$128,071	$12,807	$140,878	$133,711	$16,813	$150,524	-6.41%	-14.92%
SVC_E24	4	$95,516	$9,552	$105,068	$138,069	$3,878	$141,947	-25.98%	-32.71%
SVC_E25	3	$87,223	$8,722	$95,945	$93,150	$2,133	$95,283	0.70%	-8.46%
SVC_E26	5	$92,468	$9,247	$101,714	$105,874	$13,445	$119,319	-14.75%	-22.50%
SVC_E27	4	$84,864	$8,486	$93,351	$87,975	$5,431	$93,406	-0.06%	-9.14%
SVC_E28	3	$76,123	$6,851	$82,974	$72,847	$1,896	$74,743	11.01%	1.85%
SVC_E29	5	$109,354	$10,935	$120,290	$117,981	$8,061	$126,042	-4.56%	-13.24%
SVC_E30	4	$141,274	$21,191	$162,465	$158,332	$12,533	$170,865	-4.92%	-17.32%
SVC_E31	9	$90,632	$9,063	$99,696	$94,585	$5,904	$100,489	-0.79%	-9.81%
SVC_E32	13	$74,962	$6,747	$81,709	$78,212	$2,948	$81,160	0.68%	-7.64%
SVC_E33	36	$104,349	$10,435	$114,784	$115,159	$8,683	$123,842	-7.31%	-15.74%
SVC_E34	13	$133,274	$19,991	$153,265	$145,160	$13,562	$158,722	-3.44%	-16.03%
SVC_E35	5	$144,593	$28,919	$173,511	$138,980	$42,555	$181,535	-4.42%	-20.35%
SVC_E36	15	$78,035	$7,023	$85,058	$90,199	$7,251	$97,450	-12.72%	-19.92%
SVC_E37	6	$93,170	$9,317	$102,488	$115,575	$11,254	$126,829	-19.19%	-26.54%
SVC_E38	17	$113,140	$11,314	$124,454	$138,690	$17,678	$156,368	-20.41%	-27.64%
SVC_E39	9	$130,030	$19,504	$149,534	$163,403	$20,183	$183,586	-18.55%	-29.17%
SVC_E40	11	$103,782	$10,378	$114,160	$130,775	$17,616	$148,391	-23.07%	-30.06%
SVC_E41	13	$127,358	$19,104	$146,462	$145,521	$21,347	$166,868	-12.23%	-23.68%
SVC_E42	3	$118,417	$11,842	$130,258	$116,420	$10,856	$127,276	2.34%	-6.96%
SVC_E43	9	$151,028	$30,206	$181,234	$154,132	$26,075	$180,207	0.57%	-16.19%
SVC_E44	3	$61,148	$3,669	$64,817	$63,776	$0	$63,776	1.63%	-4.12%
SVC_E45	3	$88,675	$8,867	$97,542	$83,648	$391	$84,039	16.07%	5.52%
SVC_E46	3	$97,289	$9,729	$107,018	$127,829	$13,022	$140,851	-24.02%	-30.93%
SVC_E47	3	$116,346	$17,452	$133,798	$147,777	$19,902	$167,679	-20.21%	-30.61%
SVC_E48	4	$82,415	$7,417	$89,832	$72,847	$1,896	$74,743	20.19%	10.26%

Kentucky Power Co: Target TCC for Exempt Positions vs. Market Median Survey Data

		AEP Incumbent Data			Survey Results[1]			% Difference	
Rate case job identifier	Employee Count	Avg Base	Target Incentive [2]	Target TCC	Base	Target Incentive	Target TCC	Target TCC vs Survey Target TCC	Base vs Survey Target TCC
SVC_E49	14	$98,786	$9,879	$108,665	$93,917	$4,408	$98,325	10.52%	0.47%
SVC_E50	3	$114,471	$11,447	$125,918	$117,981	$8,061	$126,042	-0.10%	-9.18%
SVC_E51	3	$183,867	$45,967	$229,833	$177,219	$40,053	$217,272	5.78%	-15.37%
SVC_E52	3	$100,379	$10,038	$110,417	$143,697	$13,869	$157,566	-29.92%	-36.29%
SVC_E53	3	$71,835	$6,465	$78,300	$80,283	$3,223	$83,506	-6.23%	-13.98%
SVC_E54	7	$106,542	$10,654	$117,196	$119,025	$11,575	$130,600	-10.26%	-18.42%
SVC_E55	6	$133,618	$20,043	$153,660	$164,017	$21,635	$185,652	-17.23%	-28.03%
SVC_E56	4	$134,405	$20,161	$154,566	$131,559	$20,330	$151,889	1.76%	-11.51%
SVC_E57	4	$174,018	$43,504	$217,522	$207,000	$56,085	$263,085	-17.32%	-33.86%
SVC_E58	7	$127,529	$19,129	$146,658	$131,559	$20,330	$151,889	-3.44%	-16.04%
SVC_E59	7	$120,715	$18,107	$138,822	$134,550	$9,863	$144,413	-3.87%	-16.41%
SVC_E60	10	$149,688	$29,938	$179,625	$169,430	$19,788	$189,218	-5.07%	-20.89%
SVC_E61	3	$115,713	$11,571	$127,285	$131,224	$8,706	$139,930	-9.04%	-17.31%
SVC_E62	4	$73,670	$6,630	$80,300	$65,205	$1,443	$66,648	20.48%	10.54%
SVC_E63	3	$104,138	$10,414	$114,552	$105,922	$6,860	$112,782	1.57%	-7.66%
SVC_E64	4	$124,527	$18,679	$143,207	$132,505	$9,049	$141,554	1.17%	-12.03%
SVC_E65	5	$89,688	$8,969	$98,657	$112,855	$13,080	$125,935	-21.66%	-28.78%
SVC_E66	10	$75,073	$6,757	$81,830	$94,516	$8,637	$103,153	-20.67%	-27.22%
SVC_E67	9	$111,720	$11,172	$122,892	$115,120	$14,752	$129,872	-5.37%	-13.98%
SVC_E68	8	$88,185	$8,819	$97,004	$93,150	$9,315	$102,465	-5.33%	-13.94%
SVC_E69	3	$90,225	$9,023	$99,248	$103,051	$7,541	$110,592	-10.26%	-18.42%
SVC_E70	5	$190,320	$47,580	$237,900	$155,918	$23,689	$179,607	32.46%	5.96%
SVC_E71	15	$119,713	$17,957	$137,670	$124,384	$17,018	$141,402	-2.64%	-15.34%
SVC_E72	7	$77,814	$7,003	$84,818	$77,247	$5,693	$82,940	2.26%	-6.18%
SVC_E73	8	$89,575	$8,958	$98,533	$94,765	$5,803	$100,568	-2.02%	-10.93%
SVC_E74	10	$100,070	$10,007	$110,077	$122,111	$8,892	$131,003	-15.97%	-23.61%
SVC_E75	5	$90,753	$9,075	$99,828	$96,342	$2,836	$99,178	0.66%	-8.50%
SVC_E76	5	$120,031	$18,005	$138,036	$132,926	$16,134	$149,060	-7.40%	-19.47%
SVC_E77	3	$56,465	$3,388	$59,853	$45,606	$1,967	$47,573	25.81%	18.69%
SVC_E78	5	$64,744	$5,179	$69,923	$67,690	$1,407	$69,097	1.20%	-6.30%
SVC_E79	5	$142,430	$28,486	$170,916	$169,197	$38,716	$207,913	-17.79%	-31.50%
SVC_E80	5	$100,128	$10,013	$110,141	$100,600	$9,932	$110,532	-0.35%	-9.41%
SVC_E81	4	$110,494	$11,049	$121,544	$111,594	$3,229	$114,823	5.85%	-3.77%
SVC_E82	11	$149,301	$29,860	$179,161	$145,935	$27,945	$173,880	3.04%	-14.14%
SVC_E83	20	$142,672	$28,534	$171,206	$155,026	$26,077	$181,103	-5.46%	-21.22%
SVC_E84	5	$198,415	$59,524	$257,939	$228,400	$61,075	$289,475	-10.89%	-31.46%
SVC_E85	5	$63,350	$5,068	$68,418	$67,992	$3,574	$71,566	-4.40%	-11.48%
SVC_E86	3	$90,181	$9,018	$99,200	$100,422	$7,711	$108,133	-8.26%	-16.60%
SVC_E87	6	$76,017	$6,842	$82,858	$76,495	$874	$77,369	7.09%	-1.75%
SVC_E88	13	$107,420	$10,742	$118,162	$121,407	$10,130	$131,537	-10.17%	-18.33%
SVC_E89	14	$91,545	$9,155	$100,700	$95,907	$4,488	$100,395	0.30%	-8.81%
SVC_E90	5	$156,483	$31,297	$187,780	$135,715	$20,284	$155,999	20.37%	0.31%
SVC_E91	7	$131,859	$19,779	$151,638	$140,075	$24,926	$165,001	-8.10%	-20.09%
SVC_E92	6	$74,973	$5,998	$80,971	$67,464	$5,193	$72,657	11.44%	3.19%
SVC_E93	3	$133,583	$26,717	$160,300	$137,664	$25,064	$162,728	-1.49%	-17.91%
SVC_E94	3	$107,103	$10,710	$117,814	$116,541	$13,520	$130,061	-9.42%	-17.65%
SVC_E95	3	$92,231	$9,223	$101,454	$96,918	$6,582	$103,500	-1.98%	-10.89%
SVC_E96	3	$57,568	$3,454	$61,022	$64,170	$2,399	$66,569	-8.33%	-13.52%
SVC_E97	4	$100,053	$10,005	$110,058	$106,160	$4,742	$110,902	-0.76%	-9.78%
SVC_E98	3	$71,253	$6,413	$77,666	$77,651	$4,648	$82,299	-5.63%	-13.42%
SVC_E99	14	$109,038	$10,904	$119,941	$117,060	$11,544	$128,604	-6.74%	-15.21%
SVC_E100	3	$127,238	$19,086	$146,323	$131,617	$17,190	$148,807	-1.67%	-14.49%
SVC_E101	4	$108,601	$10,860	$119,461	$119,543	$7,946	$127,489	-6.30%	-14.82%
SVC_E102	3	$113,663	$11,366	$125,029	$119,029	$7,190	$126,219	-0.94%	-9.95%
SVC_E103	3	$88,936	$8,894	$97,829	$101,766	$28	$101,794	-3.89%	-12.63%
SVC_E104	3	$173,767	$43,442	$217,208	$187,598	$38,403	$226,001	-3.89%	-23.11%
SVC_E105	13	$92,059	$9,206	$101,264	$93,150	$497	$93,647	8.13%	-1.70%
SVC_E106	12	$104,034	$10,403	$114,437	$119,029	$7,190	$126,219	-9.33%	-17.58%
SVC_E107	4	$101,759	$10,176	$111,935	$103,616	$9,330	$112,946	-0.90%	-9.90%
SVC_E108	96	$150,747	$30,149	$180,897	$180,719	$26,198	$206,917	-12.58%	-27.15%
SVC_E109	4	$125,120	$18,768	$143,888	$148,034	$19,100	$167,134	-13.91%	-25.14%
SVC_E110	16	$129,374	$19,406	$148,780	$139,615	$13,169	$152,784	-2.62%	-15.32%

Kentucky Power Co: Target TCC for Exempt Positions vs. Market Median Survey Data

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SVC_E111	3	$153,289	$30,658	$183,947	$172,836	$18,156	$190,992	-3.69%	-19.74%
SVC_E112	3	$61,260	$4,901	$66,161	$67,275	$422	$67,697	-2.27%	-9.51%
SVC_E113	6	$74,018	$6,662	$80,679	$83,109	$2,395	$85,504	-5.64%	-13.43%
SVC_E114	4	$93,459	$9,346	$102,805	$93,853	$7,659	$101,512	1.27%	-7.93%
SVC_E115	6	$76,758	$6,908	$83,666	$76,212	$3,924	$80,136	4.40%	-4.22%
SVC_E116	6	$143,929	$28,786	$172,715	$144,886	$14	$144,900	19.20%	-0.67%
SVC_E117	3	$103,690	$10,369	$114,059	$75,605	$0	$75,605	50.86%	37.15%
SVC_E118	21	$181,782	$45,446	$227,228	$168,188	$22,352	$190,540	19.25%	-4.60%
SVC_E119	3	$242,492	$72,748	$315,240	$195,444	$34,217	$229,661	37.26%	5.59%
SVC_E120	3	$78,111	$7,030	$85,141	$74,904	$1,704	$76,608	11.14%	1.96%
SVC_E121	5	$90,419	$9,042	$99,461	$96,795	$4,259	$101,054	-1.58%	-10.52%
SVC_E122	15	$72,937	$6,564	$79,501	$65,546	$2,321	$67,867	17.14%	7.47%
SVC_E123	3	$98,435	$9,844	$108,279	$106,258	$5,334	$111,592	-2.97%	-11.79%
SVC_E124	14	$99,518	$9,952	$109,469	$91,357	$8,994	$100,351	9.09%	-0.83%
SVC_E125	3	$89,189	$8,919	$98,108	$75,564	$5,316	$80,880	21.30%	10.27%
SVC_E126	5	$55,543	$3,333	$58,876	$56,925	$1,763	$58,688	0.32%	-5.36%
SVC_E127	4	$63,170	$5,054	$68,224	$68,351	$1,141	$69,492	-1.82%	-9.10%
SVC_E128	7	$125,957	$18,894	$144,851	$131,037	$17,770	$148,807	-2.66%	-15.36%
SVC_E129	4	$144,987	$21,748	$166,735	$121,840	$17,797	$139,637	19.41%	3.83%
SVC_E130	3	$128,519	$19,278	$147,797	$140,044	$11,935	$151,979	-2.75%	-15.44%
SVC_E131	4	$79,092	$7,118	$86,210	$81,455	$4,434	$85,889	0.37%	-7.91%
SVC_E132	8	$80,378	$7,234	$87,612	$72,847	$1,896	$74,743	17.22%	7.54%
SVC_E133	4	$86,086	$8,609	$94,694	$93,917	$4,408	$98,325	-3.69%	-12.45%
SVC_E134	41	$117,355	$11,736	$129,091	$117,981	$8,061	$126,042	2.42%	-6.89%
SVC_E135	30	$137,161	$20,574	$157,735	$139,725	$11,832	$151,557	4.08%	-9.50%
SVC_E136	3	$80,813	$7,273	$88,087	$76,833	$2,718	$79,551	10.73%	1.59%
SVC_E137	5	$155,792	$31,158	$186,950	$153,180	$22,307	$175,487	6.53%	-11.22%
SVC_E138	4	$114,705	$11,470	$126,175	$116,959	$5,585	$122,544	2.96%	-6.40%
SVC_E139	3	$126,521	$18,978	$145,500	$109,852	$14,805	$124,657	16.72%	1.50%
SVC_E140	3	$68,535	$5,483	$74,018	$68,100	$4,954	$73,054	1.32%	-6.19%
SVC_E141	12	$120,558	$18,084	$138,641	$122,582	$11,033	$133,615	3.76%	-9.77%
SVC_E142	3	$138,105	$27,621	$165,727	$151,449	$23,536	$174,985	-5.29%	-21.08%
SVC_E143	3	$76,039	$6,844	$82,882	$77,625	$3,191	$80,816	2.56%	-5.91%
SVC_E144	7	$85,137	$8,514	$93,650	$92,725	$5,558	$98,283	-4.71%	-13.38%
SVC_E145	4	$106,282	$10,628	$116,910	$113,850	$11,292	$125,142	-6.58%	-15.07%
SVC_E146	8	$132,056	$19,808	$151,865	$143,234	$4,358	$147,592	2.89%	-10.53%
SVC_E147	4	$171,623	$34,325	$205,947	$156,855	$13,237	$170,092	21.08%	0.90%
SVC_E148	5	$97,270	$9,727	$106,997	$90,479	$4,451	$94,930	12.71%	2.46%
SVC_E149	10	$91,066	$9,107	$100,172	$98,532	$4,244	$102,776	-2.53%	-11.39%
SVC_E150	10	$72,137	$5,771	$77,908	$74,520	$974	$75,494	3.20%	-4.45%
SVC_E151	4	$126,531	$12,653	$139,184	$118,032	$3,454	$121,486	14.57%	4.15%
SVC_E152	9	$61,165	$4,893	$66,058	$56,925	$804	$57,729	14.43%	5.95%
SVC_E153	5	$156,856	$31,371	$188,228	$147,326	$16,226	$163,552	15.09%	-4.09%
SVC_E154	7	$124,182	$12,418	$136,601	$119,025	$9,904	$128,929	5.95%	-3.68%
SVC_E155	4	$113,414	$11,341	$124,755	$118,491	$14,496	$132,987	-6.19%	-14.72%
SVC_E156	8	$95,114	$9,511	$104,625	$106,036	$10,222	$116,258	-10.01%	-18.19%
SVC_E157	3	$118,014	$11,801	$129,815	$125,390	$17,132	$142,522	-8.92%	-17.20%
SVC_E158	6	$150,429	$30,086	$180,514	$181,868	$29,949	$211,817	-14.78%	-28.98%
SVC_E159	9	$91,343	$9,134	$100,477	$94,082	$3,260	$97,342	3.22%	-6.16%
SVC_E160	4	$109,958	$10,996	$120,954	$121,181	$7,133	$128,314	-5.74%	-14.31%
SVC_E161	3	$132,772	$19,916	$152,688	$139,788	$15,142	$154,930	-1.45%	-14.30%
SVC_E162	4	$151,883	$30,377	$182,260	$163,918	$29,206	$193,124	-5.63%	-21.35%
SVC_E163	5	$83,866	$7,548	$91,414	$76,707	$3,292	$79,999	14.27%	4.83%
SVC_E164	10	$167,159	$33,432	$200,591	$154,132	$26,075	$180,207	11.31%	-7.24%
SVC_E165	16	$88,376	$8,838	$97,214	$103,500	$9,632	$113,132	-14.07%	-21.88%
SVC_E166	11	$79,071	$7,116	$86,187	$88,084	$6,812	$94,896	-9.18%	-16.68%
SVC_E167	9	$105,375	$10,537	$115,912	$127,426	$15,928	$143,354	-19.14%	-26.49%
SVC_E168	3	$112,089	$11,209	$123,298	$131,224	$8,706	$139,930	-11.89%	-19.90%
SVC_E169	3	$76,357	$6,872	$83,230	$84,611	$2,987	$87,598	-4.99%	-12.83%
SVC_E170	4	$65,974	$5,278	$71,252	$71,933	$2,154	$74,087	-3.83%	-10.95%
SVC_E171	5	$144,330	$28,866	$173,196	$147,177	$23,868	$171,045	1.26%	-15.62%
SVC_E172	5	$80,196	$7,218	$87,414	$72,450	$5,554	$78,004	12.06%	2.81%

Kentucky Power Co: Target TCC for Exempt Positions vs. Market Median Survey Data

		AEP Incumbent Data			Survey Results[1]			% Difference	
Rate case job identifier	Employee Count	Avg Base	Target Incentive (2)	Target TCC	Base	Target Incentive	Target TCC	Target TCC vs Survey Target TCC	Base vs Survey Target TCC
SVC_E173	15	$80,692	$7,262	$87,954	$82,796	$6,209	$89,005	-1.18%	-9.34%
SVC_E174	7	$90,571	$9,057	$99,628	$100,327	$9,957	$110,284	-9.66%	-17.87%
SVC_E175	8	$82,667	$7,440	$90,107	$92,822	$10,171	$102,993	-12.51%	-19.74%
SVC_E176	7	$64,910	$5,193	$70,103	$75,575	$5,849	$81,424	-13.90%	-20.28%
SVC_E177	3	$57,389	$3,443	$60,832	$62,626	$4,110	$66,736	-8.85%	-14.01%
SVC_E178	3	$107,148	$10,715	$117,863	$110,938	$11,782	$122,720	-3.96%	-12.69%
SVC_E179	8	$136,715	$20,507	$157,222	$142,650	$25,738	$168,388	-6.63%	-18.81%
SVC_E180	43	$98,464	$9,846	$108,311	$98,325	$3,815	$102,140	6.04%	-3.60%
SVC_E181	20	$110,479	$11,048	$121,526	$123,314	$7,993	$131,307	-7.45%	-15.86%
SVC_E182	10	$82,272	$7,404	$89,677	$78,546	$2,960	$81,506	10.02%	0.94%
SVC_E183	22	$93,994	$9,399	$103,393	$91,476	$8,762	$100,238	3.15%	-6.23%
SVC_E184	51	$113,601	$11,360	$124,961	$118,136	$14,131	$132,267	-5.52%	-14.11%
SVC_E185	35	$132,677	$19,902	$152,579	$133,598	$18,804	$152,402	0.12%	-12.94%
SVC_E186	30	$154,365	$30,873	$185,238	$148,006	$22,707	$170,713	8.51%	-9.58%
SVC_E187	3	$85,521	$8,552	$94,073	$94,963	$4,164	$99,127	-5.10%	-13.73%
SVC_E188	3	$101,272	$10,127	$111,399	$117,546	$5,553	$123,099	-9.50%	-17.73%
SVC_E189	3	$119,958	$17,994	$137,952	$128,493	$9,458	$137,951	0.00%	-13.04%
SVC_E190	3	$177,467	$44,367	$221,833	$195,686	$50,001	$245,687	-9.71%	-27.77%
SVC_E191	3	$132,010	$19,801	$151,811	$139,080	$19,223	$158,303	-4.10%	-16.61%
SVC_E192	5	$146,245	$29,249	$175,494	$148,987	$17,161	$166,148	5.63%	-11.98%
SVC_E193	11	$132,273	$19,841	$152,114	$141,980	$14,470	$156,450	-2.77%	-15.45%
SVC_E194	19	$108,636	$10,864	$119,500	$118,115	$10,958	$129,073	-7.42%	-15.83%
SVC_E195	22	$93,123	$9,312	$102,436	$94,205	$8,485	$102,690	-0.25%	-9.32%
SVC_E196	6	$71,240	$5,699	$76,939	$79,918	$4,419	$84,337	-8.77%	-15.53%
SVC_E197	3	$144,276	$21,641	$165,917	$143,576	$24,880	$168,456	-1.51%	-14.35%
SVC_E198	3	$164,837	$32,967	$197,804	$156,978	$26,306	$183,284	7.92%	-10.06%
SVC_E199	3	$105,279	$10,528	$115,807	$106,258	$5,334	$111,592	3.78%	-5.66%
SVC_E200	3	$109,039	$10,904	$119,943	$111,594	$3,229	$114,823	4.46%	-5.04%
SVC_E201	4	$98,907	$9,891	$108,797	$91,442	$5,388	$96,830	12.36%	2.14%
SVC_E202	3	$136,666	$27,333	$164,000	$148,987	$17,161	$166,148	-1.29%	-17.74%
SVC_E203	5	$86,588	$8,659	$95,247	$106,312	$9,120	$115,432	-17.49%	-24.99%
SVC_E204	3	$106,154	$10,615	$116,769	$123,417	$14,244	$137,661	-15.18%	-22.89%
SVC_E205	3	$155,790	$31,158	$186,947	$155,118	$12,299	$167,417	11.67%	-6.95%
SVC_E206	16	$117,130	$11,713	$128,843	$131,224	$8,706	$139,930	-7.92%	-16.29%
SVC_E207	11	$93,853	$9,385	$103,239	$106,258	$5,334	$111,592	-7.49%	-15.90%
SVC_E208	9	$97,136	$9,714	$106,849	$106,258	$5,334	$111,592	-4.25%	-12.95%
SVC_E209	13	$73,575	$6,622	$80,197	$84,611	$2,987	$87,598	-8.45%	-16.01%
SVC_E210	7	$63,132	$5,051	$68,182	$71,933	$2,154	$74,087	-7.97%	-14.79%
SVC_E211	4	$123,689	$18,553	$142,243	$148,854	$19,667	$168,521	-15.59%	-26.60%
SVC_E212	6	$164,143	$41,036	$205,178	$184,238	$30,098	$214,336	-4.27%	-23.42%
SVC_E213	5	$159,084	$31,817	$190,901	$184,238	$30,098	$214,336	-10.93%	-25.78%
SVC_E214	6	$155,157	$31,031	$186,188	$178,415	$26,920	$205,335	-9.32%	-24.44%
SVC_E215	16	$121,204	$18,181	$139,385	$125,595	$13,869	$139,464	-0.06%	-13.09%
SVC_E216	17	$84,936	$7,644	$92,581	$90,985	$5,945	$96,930	-4.49%	-12.37%
SVC_E217	7	$100,386	$10,039	$110,424	$104,957	$8,206	$113,163	-2.42%	-11.29%
SVC_E218	26	$113,500	$11,350	$124,850	$122,293	$14,936	$137,229	-9.02%	-17.29%
SVC_E219	17	$125,128	$18,769	$143,897	$133,888	$15,044	$148,932	-3.38%	-15.98%
SVC_E220	21	$127,389	$19,108	$146,497	$133,888	$15,044	$148,932	-1.63%	-14.47%
SVC_E221	10	$147,596	$29,519	$177,115	$157,280	$27,596	$184,876	-4.20%	-20.16%
SVC_E222	4	$179,426	$44,857	$224,283	$192,607	$31,705	$224,312	-0.01%	-20.01%
SVC_E223	9	$156,816	$31,363	$188,179	$181,868	$29,949	$211,817	-11.16%	-25.97%
SVC_E224	7	$157,321	$31,464	$188,785	$181,868	$29,949	$211,817	-10.87%	-25.73%
SVC_E225	6	$125,025	$18,754	$143,779	$131,195	$19,832	$151,027	-4.80%	-17.22%
SVC_E226	3	$83,333	$7,500	$90,833	$79,523	$9,080	$88,603	2.52%	-5.95%
SVC_E227	6	$129,908	$19,486	$149,394	$144,690	$14,228	$158,918	-5.99%	-18.25%
SVC_E228	8	$125,712	$18,857	$144,569	$144,690	$14,228	$158,918	-9.03%	-20.89%
SVC_E229	6	$113,500	$11,350	$124,850	$127,823	$12,958	$140,781	-11.32%	-19.38%
SVC_E230	4	$98,125	$9,813	$107,938	$107,485	$6,365	$113,850	-5.19%	-13.81%
SVC_E231	30	$94,525	$9,452	$103,977	$108,805	$8,590	$117,395	-11.43%	-19.48%
SVC_E232	18	$95,941	$9,594	$105,535	$108,805	$8,590	$117,395	-10.10%	-18.27%
SVC_E233	10	$116,068	$17,410	$133,478	$155,354	$21,878	$177,232	-24.69%	-34.51%
SVC_E234	11	$123,284	$18,493	$141,776	$125,595	$13,869	$139,464	1.66%	-11.60%

Kentucky Power Co: Target TCC for Exempt Positions vs. Market Median Survey Data

		AEP Incumbent Data			Survey Results[1]			% Difference	
Rate case job identifier	Employee Count	Avg Base	Target Incentive (2)	Target TCC	Base	Target Incentive	Target TCC	Target TCC vs Survey Target TCC	Base vs Survey Target TCC
SVC_E235	7	$118,338	$17,751	$136,089	$140,007	$20,915	$160,922	-15.43%	-26.46%
SVC_E236	3	$102,938	$10,294	$113,232	$130,695	$18,098	$148,793	-23.90%	-30.82%
AEPSC Job Count	236					AEPSC AVERAGE		-1.6%	-12.5%
AEPSC Incumbent Count	2,582								
							AVERAGE	**-1.7%**	**-12.6%**
TOTAL JOB COUNT	**245**				% of Jobs Above Market Competitive Range[4]			9%	1%
TOTAL INCUMBENT Count	**2,622**				% of Jobs Below Market Competitive Range[4]			9%	43%

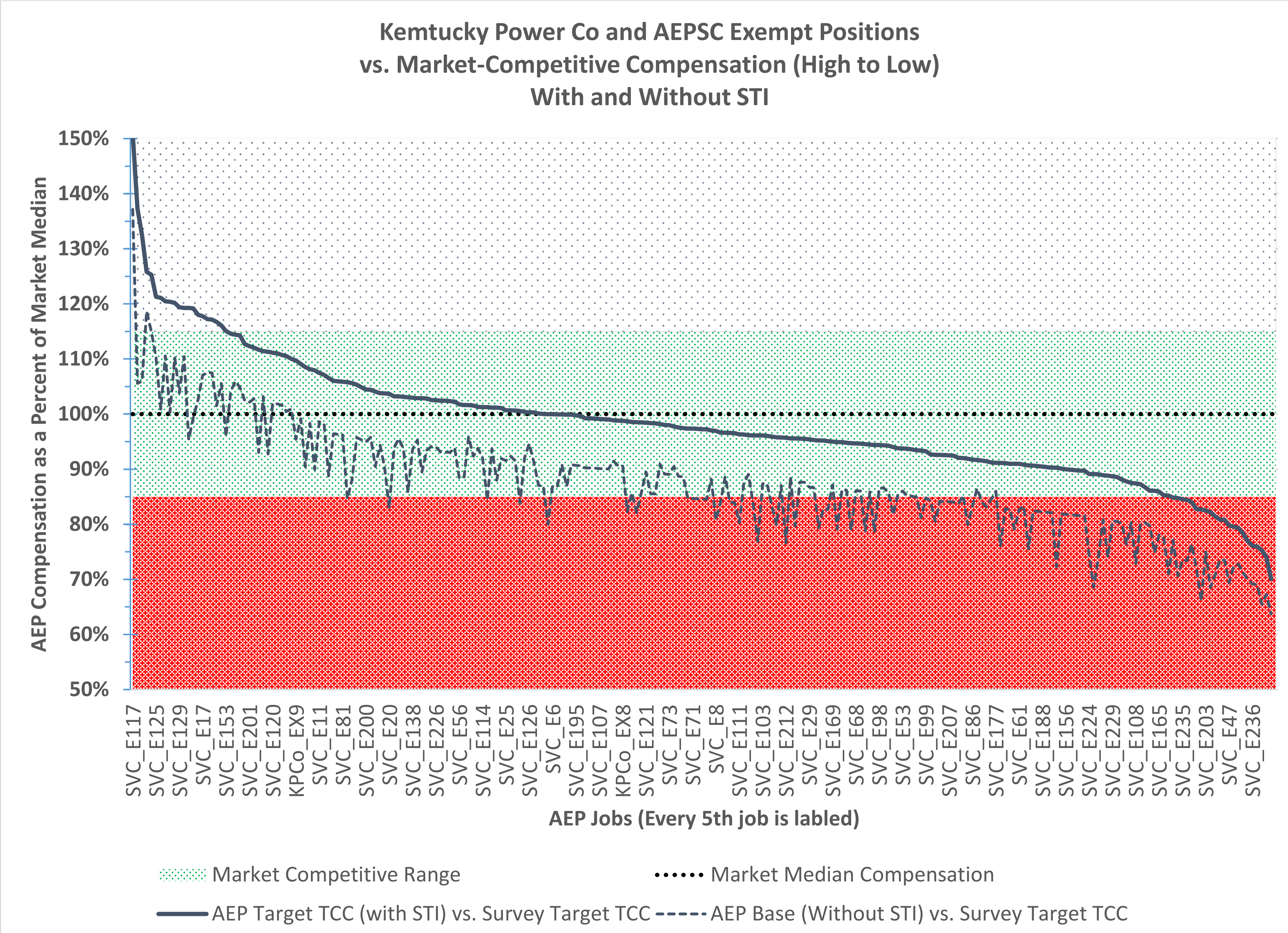
Notes:

(1) All survey data aged to March 31, 2023 at 4% annual rate

(2) Reflects annual target incentive payout for job

(3) Survey Data from April 2022 Towers Watson Energy Services Middle Management, Professional & Support Survey and Towers Watson General Industry Middle Management, Professional & Support Survey

(4) A market competitive range of +/- 15 percent has been used for all exempt positions


Kemtucky Power Co and AEPSC Exempt Positions
vs. Market-Competitive Compensation (High to Low)
With and Without STI
AEP Compensation as a Percent of Market Median
150%
140%
130%
120%
110%
100%
90%
80%
70%
60%
50%
SVC_E117
SVC_E125
SVC_E129
SVC_E17
SVC_E153
SVC_E201
SVC_E120
KPCo_EX9
SVC_E11
SVC_E81
SVC_E200
SVC_E20
SVC_E138
SVC_E226
SVC_E56
SVC_E114
SVC_E25
SVC_E126
SVC_E6
SVC_E195
SVC_E107
KPCo_EX8
SVC_E121
SVC_E73
SVC_E71
SVC_E8
SVC_E111
SVC_E103
SVC_E212
SVC_E29
SVC_E169
SVC_E68
SVC_E98
SVC_E53
SVC_E99
SVC_E207
SVC_E86
SVC_E177
SVC_E61
SVC_E188
SVC_E156
SVC_E224
SVC_E229
SVC_E108
SVC_E165
SVC_E235
SVC_E203
SVC_E47
SVC_E236
AEP Jobs (Every 5th job is labled)
Market Competitive Range
Market Median Compensation
AEP Target TCC (with STI) vs. Survey Target TCC
AEP Base (Without STI) vs. Survey Target TCC

AEP Job	AEP Target TCC (with STI) vs. Survey Target TCC	AEP Base (Without STI) vs. Survey Target TCC	Market Low	Market Median Compensation	Market Competitive Range	Market Max
SVC_E117	150.9%	137.1%	85.0%	100.0%	30.0%	35.0%
SVC_E119	137.3%	105.6%	85.0%	100.0%	30.0%	35.0%
SVC_E70	132.5%	106.0%	85.0%	100.0%	30.0%	35.0%
SVC_E77	125.8%	118.7%	85.0%	100.0%	30.0%	35.0%
SVC_E15	125.3%	114.9%	85.0%	100.0%	30.0%	35.0%
SVC_E125	121.3%	110.3%	85.0%	100.0%	30.0%	35.0%
SVC_E147	121.1%	100.9%	85.0%	100.0%	30.0%	35.0%
SVC_E62	120.5%	110.5%	85.0%	100.0%	30.0%	35.0%
SVC_E90	120.4%	100.3%	85.0%	100.0%	30.0%	35.0%
SVC_E48	120.2%	110.3%	85.0%	100.0%	30.0%	35.0%
SVC_E129	119.4%	103.8%	85.0%	100.0%	30.0%	35.0%
SVC_E14	119.3%	110.4%	85.0%	100.0%	30.0%	35.0%
SVC_E118	119.3%	95.4%	85.0%	100.0%	30.0%	35.0%
SVC_E116	119.2%	99.3%	85.0%	100.0%	30.0%	35.0%
KPCo_EX2	118.0%	102.6%	85.0%	100.0%	30.0%	35.0%
SVC_E17	117.8%	107.1%	85.0%	100.0%	30.0%	35.0%
SVC_E132	117.2%	107.5%	85.0%	100.0%	30.0%	35.0%
SVC_E122	117.1%	107.5%	85.0%	100.0%	30.0%	35.0%
SVC_E139	116.7%	101.5%	85.0%	100.0%	30.0%	35.0%
SVC_E45	116.1%	105.5%	85.0%	100.0%	30.0%	35.0%
SVC_E153	115.1%	95.9%	85.0%	100.0%	30.0%	35.0%
SVC_E151	114.6%	104.2%	85.0%	100.0%	30.0%	35.0%
SVC_E152	114.4%	106.0%	85.0%	100.0%	30.0%	35.0%
SVC_E163	114.3%	104.8%	85.0%	100.0%	30.0%	35.0%
SVC_E148	112.7%	102.5%	85.0%	100.0%	30.0%	35.0%
SVC_E201	112.4%	102.1%	85.0%	100.0%	30.0%	35.0%
SVC_E172	112.1%	102.8%	85.0%	100.0%	30.0%	35.0%
SVC_E205	111.7%	93.1%	85.0%	100.0%	30.0%	35.0%
SVC_E92	111.4%	103.2%	85.0%	100.0%	30.0%	35.0%
SVC_E164	111.3%	92.8%	85.0%	100.0%	30.0%	35.0%
SVC_E120	111.1%	102.0%	85.0%	100.0%	30.0%	35.0%
SVC_E28	111.0%	101.8%	85.0%	100.0%	30.0%	35.0%
SVC_E136	110.7%	101.6%	85.0%	100.0%	30.0%	35.0%
SVC_E49	110.5%	100.5%	85.0%	100.0%	30.0%	35.0%
SVC_E182	110.0%	100.9%	85.0%	100.0%	30.0%	35.0%
KPCo_EX9	109.7%	95.4%	85.0%	100.0%	30.0%	35.0%
SVC_E124	109.1%	99.2%	85.0%	100.0%	30.0%	35.0%
SVC_E186	108.5%	90.4%	85.0%	100.0%	30.0%	35.0%
SVC_E105	108.1%	98.3%	85.0%	100.0%	30.0%	35.0%
SVC_E198	107.9%	89.9%	85.0%	100.0%	30.0%	35.0%
SVC_E11	107.5%	98.6%	85.0%	100.0%	30.0%	35.0%
SVC_E87	107.1%	98.3%	85.0%	100.0%	30.0%	35.0%
SVC_E137	106.5%	88.8%	85.0%	100.0%	30.0%	35.0%
SVC_E180	106.0%	96.4%	85.0%	100.0%	30.0%	35.0%
SVC_E154	106.0%	96.3%	85.0%	100.0%	30.0%	35.0%

SVC_E81	105.9%	96.2%	85.0%	100.0%	30.0%	35.0%
SVC_E51	105.8%	84.6%	85.0%	100.0%	30.0%	35.0%
SVC_E192	105.6%	88.0%	85.0%	100.0%	30.0%	35.0%
SVC_E16	105.3%	95.7%	85.0%	100.0%	30.0%	35.0%
SVC_E21	104.9%	95.4%	85.0%	100.0%	30.0%	35.0%
SVC_E200	104.5%	95.0%	85.0%	100.0%	30.0%	35.0%
SVC_E115	104.4%	95.8%	85.0%	100.0%	30.0%	35.0%
SVC_E135	104.1%	90.5%	85.0%	100.0%	30.0%	35.0%
SVC_E199	103.8%	94.3%	85.0%	100.0%	30.0%	35.0%
SVC_E141	103.8%	90.2%	85.0%	100.0%	30.0%	35.0%
SVC_E20	103.6%	82.9%	85.0%	100.0%	30.0%	35.0%
SVC_E159	103.2%	93.8%	85.0%	100.0%	30.0%	35.0%
SVC_E150	103.2%	95.6%	85.0%	100.0%	30.0%	35.0%
SVC_E183	103.1%	93.8%	85.0%	100.0%	30.0%	35.0%
SVC_E82	103.0%	85.9%	85.0%	100.0%	30.0%	35.0%
SVC_E138	103.0%	93.6%	85.0%	100.0%	30.0%	35.0%
SVC_E2	102.9%	95.3%	85.0%	100.0%	30.0%	35.0%
SVC_E146	102.9%	89.5%	85.0%	100.0%	30.0%	35.0%
SVC_E7	102.8%	93.5%	85.0%	100.0%	30.0%	35.0%
SVC_E143	102.6%	94.1%	85.0%	100.0%	30.0%	35.0%
SVC_E226	102.5%	94.1%	85.0%	100.0%	30.0%	35.0%
SVC_E22	102.4%	93.1%	85.0%	100.0%	30.0%	35.0%
SVC_E134	102.4%	93.1%	85.0%	100.0%	30.0%	35.0%
SVC_E42	102.3%	93.0%	85.0%	100.0%	30.0%	35.0%
SVC_E72	102.3%	93.8%	85.0%	100.0%	30.0%	35.0%
SVC_E56	101.8%	88.5%	85.0%	100.0%	30.0%	35.0%
SVC_E234	101.7%	88.4%	85.0%	100.0%	30.0%	35.0%
SVC_E44	101.6%	95.9%	85.0%	100.0%	30.0%	35.0%
SVC_E63	101.6%	92.3%	85.0%	100.0%	30.0%	35.0%
SVC_E140	101.3%	93.8%	85.0%	100.0%	30.0%	35.0%
SVC_E114	101.3%	92.1%	85.0%	100.0%	30.0%	35.0%
SVC_E171	101.3%	84.4%	85.0%	100.0%	30.0%	35.0%
SVC_E78	101.2%	93.7%	85.0%	100.0%	30.0%	35.0%
SVC_E64	101.2%	88.0%	85.0%	100.0%	30.0%	35.0%
SVC_E3	101.1%	91.9%	85.0%	100.0%	30.0%	35.0%
SVC_E25	100.7%	91.5%	85.0%	100.0%	30.0%	35.0%
SVC_E32	100.7%	92.4%	85.0%	100.0%	30.0%	35.0%
SVC_E75	100.7%	91.5%	85.0%	100.0%	30.0%	35.0%
SVC_E43	100.6%	83.8%	85.0%	100.0%	30.0%	35.0%
SVC_E131	100.4%	92.1%	85.0%	100.0%	30.0%	35.0%
SVC_E126	100.3%	94.6%	85.0%	100.0%	30.0%	35.0%
SVC_E89	100.3%	91.2%	85.0%	100.0%	30.0%	35.0%
SVC_E185	100.1%	87.1%	85.0%	100.0%	30.0%	35.0%
SVC_E189	100.0%	87.0%	85.0%	100.0%	30.0%	35.0%
SVC_E222	100.0%	80.0%	85.0%	100.0%	30.0%	35.0%
SVC_E6	100.0%	86.9%	85.0%	100.0%	30.0%	35.0%
SVC_E215	99.9%	86.9%	85.0%	100.0%	30.0%	35.0%
SVC_E27	99.9%	90.9%	85.0%	100.0%	30.0%	35.0%
SVC_E9	99.9%	86.9%	85.0%	100.0%	30.0%	35.0%
SVC_E50	99.9%	90.8%	85.0%	100.0%	30.0%	35.0%
SVC_E195	99.8%	90.7%	85.0%	100.0%	30.0%	35.0%
SVC_E80	99.6%	90.6%	85.0%	100.0%	30.0%	35.0%
SVC_E97	99.2%	90.2%	85.0%	100.0%	30.0%	35.0%
SVC_E19	99.2%	90.2%	85.0%	100.0%	30.0%	35.0%
SVC_E31	99.2%	90.2%	85.0%	100.0%	30.0%	35.0%

SVC_E107	99.1%	90.1%	85.0%	100.0%	30.0%	35.0%
SVC_E102	99.1%	90.1%	85.0%	100.0%	30.0%	35.0%
SVC_E10	99.0%	90.0%	85.0%	100.0%	30.0%	35.0%
SVC_E5	98.9%	91.5%	85.0%	100.0%	30.0%	35.0%
SVC_E173	98.8%	90.7%	85.0%	100.0%	30.0%	35.0%
KPCo_EX8	98.8%	90.6%	85.0%	100.0%	30.0%	35.0%
SVC_E202	98.7%	82.3%	85.0%	100.0%	30.0%	35.0%
SVC_E161	98.6%	85.7%	85.0%	100.0%	30.0%	35.0%
SVC_E93	98.5%	82.1%	85.0%	100.0%	30.0%	35.0%
SVC_E197	98.5%	85.6%	85.0%	100.0%	30.0%	35.0%
SVC_E121	98.4%	89.5%	85.0%	100.0%	30.0%	35.0%
SVC_E220	98.4%	85.5%	85.0%	100.0%	30.0%	35.0%
SVC_E100	98.3%	85.5%	85.0%	100.0%	30.0%	35.0%
SVC_E127	98.2%	90.9%	85.0%	100.0%	30.0%	35.0%
SVC_E95	98.0%	89.1%	85.0%	100.0%	30.0%	35.0%
SVC_E73	98.0%	89.1%	85.0%	100.0%	30.0%	35.0%
SVC_E112	97.7%	90.5%	85.0%	100.0%	30.0%	35.0%
SVC_E217	97.6%	88.7%	85.0%	100.0%	30.0%	35.0%
SVC_E149	97.5%	88.6%	85.0%	100.0%	30.0%	35.0%
SVC_E110	97.4%	84.7%	85.0%	100.0%	30.0%	35.0%
SVC_E71	97.4%	84.7%	85.0%	100.0%	30.0%	35.0%
SVC_E128	97.3%	84.6%	85.0%	100.0%	30.0%	35.0%
SVC_E130	97.2%	84.6%	85.0%	100.0%	30.0%	35.0%
SVC_E193	97.2%	84.5%	85.0%	100.0%	30.0%	35.0%
SVC_E123	97.0%	88.2%	85.0%	100.0%	30.0%	35.0%
SVC_E8	97.0%	80.8%	85.0%	100.0%	30.0%	35.0%
SVC_E219	96.6%	84.0%	85.0%	100.0%	30.0%	35.0%
SVC_E4	96.6%	88.6%	85.0%	100.0%	30.0%	35.0%
SVC_E34	96.6%	84.0%	85.0%	100.0%	30.0%	35.0%
SVC_E58	96.6%	84.0%	85.0%	100.0%	30.0%	35.0%
SVC_E111	96.3%	80.3%	85.0%	100.0%	30.0%	35.0%
SVC_E133	96.3%	87.6%	85.0%	100.0%	30.0%	35.0%
SVC_E170	96.2%	89.0%	85.0%	100.0%	30.0%	35.0%
SVC_E59	96.1%	83.6%	85.0%	100.0%	30.0%	35.0%
SVC_E104	96.1%	76.9%	85.0%	100.0%	30.0%	35.0%
SVC_E103	96.1%	87.4%	85.0%	100.0%	30.0%	35.0%
SVC_E178	96.0%	87.3%	85.0%	100.0%	30.0%	35.0%
SVC_E191	95.9%	83.4%	85.0%	100.0%	30.0%	35.0%
SVC_E221	95.8%	79.8%	85.0%	100.0%	30.0%	35.0%
SVC_E208	95.7%	87.0%	85.0%	100.0%	30.0%	35.0%
SVC_E212	95.7%	76.6%	85.0%	100.0%	30.0%	35.0%
SVC_E85	95.6%	88.5%	85.0%	100.0%	30.0%	35.0%
SVC_E35	95.6%	79.7%	85.0%	100.0%	30.0%	35.0%
SVC_E1	95.5%	87.7%	85.0%	100.0%	30.0%	35.0%
SVC_E216	95.5%	87.6%	85.0%	100.0%	30.0%	35.0%
SVC_E29	95.4%	86.8%	85.0%	100.0%	30.0%	35.0%
SVC_E144	95.3%	86.6%	85.0%	100.0%	30.0%	35.0%
SVC_E18	95.2%	79.4%	85.0%	100.0%	30.0%	35.0%
SVC_E225	95.2%	82.8%	85.0%	100.0%	30.0%	35.0%
SVC_E30	95.1%	82.7%	85.0%	100.0%	30.0%	35.0%
SVC_E169	95.0%	87.2%	85.0%	100.0%	30.0%	35.0%
SVC_E60	94.9%	79.1%	85.0%	100.0%	30.0%	35.0%
SVC_E187	94.9%	86.3%	85.0%	100.0%	30.0%	35.0%
SVC_E230	94.8%	86.2%	85.0%	100.0%	30.0%	35.0%
SVC_E142	94.7%	78.9%	85.0%	100.0%	30.0%	35.0%

SVC_E68	94.7%	86.1%	85.0%	100.0%	30.0%	35.0%
SVC_E67	94.6%	86.0%	85.0%	100.0%	30.0%	35.0%
SVC_E83	94.5%	78.8%	85.0%	100.0%	30.0%	35.0%
SVC_E184	94.5%	85.9%	85.0%	100.0%	30.0%	35.0%
SVC_E162	94.4%	78.6%	85.0%	100.0%	30.0%	35.0%
SVC_E98	94.4%	86.6%	85.0%	100.0%	30.0%	35.0%
SVC_E113	94.4%	86.6%	85.0%	100.0%	30.0%	35.0%
SVC_E160	94.3%	85.7%	85.0%	100.0%	30.0%	35.0%
SVC_E227	94.0%	81.7%	85.0%	100.0%	30.0%	35.0%
SVC_E155	93.8%	85.3%	85.0%	100.0%	30.0%	35.0%
SVC_E53	93.8%	86.0%	85.0%	100.0%	30.0%	35.0%
SVC_E101	93.7%	85.2%	85.0%	100.0%	30.0%	35.0%
SVC_E23	93.6%	85.1%	85.0%	100.0%	30.0%	35.0%
SVC_E145	93.4%	84.9%	85.0%	100.0%	30.0%	35.0%
SVC_E179	93.4%	81.2%	85.0%	100.0%	30.0%	35.0%
SVC_E99	93.3%	84.8%	85.0%	100.0%	30.0%	35.0%
SVC_E33	92.7%	84.3%	85.0%	100.0%	30.0%	35.0%
SVC_E76	92.6%	80.5%	85.0%	100.0%	30.0%	35.0%
SVC_E194	92.6%	84.2%	85.0%	100.0%	30.0%	35.0%
SVC_E181	92.6%	84.1%	85.0%	100.0%	30.0%	35.0%
SVC_E207	92.5%	84.1%	85.0%	100.0%	30.0%	35.0%
KPCo_EX1	92.4%	84.0%	85.0%	100.0%	30.0%	35.0%
SVC_E206	92.1%	83.7%	85.0%	100.0%	30.0%	35.0%
SVC_E210	92.0%	85.2%	85.0%	100.0%	30.0%	35.0%
SVC_E91	91.9%	79.9%	85.0%	100.0%	30.0%	35.0%
SVC_E86	91.7%	83.4%	85.0%	100.0%	30.0%	35.0%
SVC_E96	91.7%	86.5%	85.0%	100.0%	30.0%	35.0%
SVC_E209	91.6%	84.0%	85.0%	100.0%	30.0%	35.0%
KPCo_EX4	91.4%	83.1%	85.0%	100.0%	30.0%	35.0%
SVC_E196	91.2%	84.5%	85.0%	100.0%	30.0%	35.0%
SVC_E177	91.2%	86.0%	85.0%	100.0%	30.0%	35.0%
SVC_E13	91.1%	76.0%	85.0%	100.0%	30.0%	35.0%
SVC_E157	91.1%	82.8%	85.0%	100.0%	30.0%	35.0%
SVC_E218	91.0%	82.7%	85.0%	100.0%	30.0%	35.0%
SVC_E228	91.0%	79.1%	85.0%	100.0%	30.0%	35.0%
SVC_E61	91.0%	82.7%	85.0%	100.0%	30.0%	35.0%
SVC_E166	90.8%	83.3%	85.0%	100.0%	30.0%	35.0%
SVC_E214	90.7%	75.6%	85.0%	100.0%	30.0%	35.0%
SVC_E106	90.7%	82.4%	85.0%	100.0%	30.0%	35.0%
SVC_E94	90.6%	82.3%	85.0%	100.0%	30.0%	35.0%
SVC_E188	90.5%	82.3%	85.0%	100.0%	30.0%	35.0%
SVC_E174	90.3%	82.1%	85.0%	100.0%	30.0%	35.0%
KPCo_EX6	90.3%	82.1%	85.0%	100.0%	30.0%	35.0%
SVC_E190	90.3%	72.2%	85.0%	100.0%	30.0%	35.0%
SVC_E12	90.1%	81.9%	85.0%	100.0%	30.0%	35.0%
SVC_E156	90.0%	81.8%	85.0%	100.0%	30.0%	35.0%
SVC_E232	89.9%	81.7%	85.0%	100.0%	30.0%	35.0%
SVC_E88	89.8%	81.7%	85.0%	100.0%	30.0%	35.0%
SVC_E69	89.7%	81.6%	85.0%	100.0%	30.0%	35.0%
SVC_E54	89.7%	81.6%	85.0%	100.0%	30.0%	35.0%
SVC_E224	89.1%	74.3%	85.0%	100.0%	30.0%	35.0%
SVC_E84	89.1%	68.5%	85.0%	100.0%	30.0%	35.0%
SVC_E213	89.1%	74.2%	85.0%	100.0%	30.0%	35.0%
KPCo_EX7	88.9%	80.8%	85.0%	100.0%	30.0%	35.0%
SVC_E223	88.8%	74.0%	85.0%	100.0%	30.0%	35.0%

SVC_E229	88.7%	80.6%	85.0%	100.0%	30.0%	35.0%
SVC_E231	88.6%	80.5%	85.0%	100.0%	30.0%	35.0%
SVC_E168	88.1%	80.1%	85.0%	100.0%	30.0%	35.0%
SVC_E41	87.8%	76.3%	85.0%	100.0%	30.0%	35.0%
SVC_E175	87.5%	80.3%	85.0%	100.0%	30.0%	35.0%
SVC_E108	87.4%	72.9%	85.0%	100.0%	30.0%	35.0%
SVC_E36	87.3%	80.1%	85.0%	100.0%	30.0%	35.0%
KPCo_EX3	86.7%	80.3%	85.0%	100.0%	30.0%	35.0%
SVC_E176	86.1%	79.7%	85.0%	100.0%	30.0%	35.0%
SVC_E109	86.1%	74.9%	85.0%	100.0%	30.0%	35.0%
SVC_E165	85.9%	78.1%	85.0%	100.0%	30.0%	35.0%
SVC_E26	85.2%	77.5%	85.0%	100.0%	30.0%	35.0%
SVC_E158	85.2%	71.0%	85.0%	100.0%	30.0%	35.0%
SVC_E204	84.8%	77.1%	85.0%	100.0%	30.0%	35.0%
KPCo_EX5	84.8%	70.6%	85.0%	100.0%	30.0%	35.0%
SVC_E235	84.6%	73.5%	85.0%	100.0%	30.0%	35.0%
SVC_E211	84.4%	73.4%	85.0%	100.0%	30.0%	35.0%
SVC_E74	84.0%	76.4%	85.0%	100.0%	30.0%	35.0%
SVC_E55	82.8%	72.0%	85.0%	100.0%	30.0%	35.0%
SVC_E57	82.7%	66.1%	85.0%	100.0%	30.0%	35.0%
SVC_E203	82.5%	75.0%	85.0%	100.0%	30.0%	35.0%
SVC_E79	82.2%	68.5%	85.0%	100.0%	30.0%	35.0%
SVC_E39	81.5%	70.8%	85.0%	100.0%	30.0%	35.0%
SVC_E167	80.9%	73.5%	85.0%	100.0%	30.0%	35.0%
SVC_E37	80.8%	73.5%	85.0%	100.0%	30.0%	35.0%
SVC_E47	79.8%	69.4%	85.0%	100.0%	30.0%	35.0%
SVC_E38	79.6%	72.4%	85.0%	100.0%	30.0%	35.0%
SVC_E66	79.3%	72.8%	85.0%	100.0%	30.0%	35.0%
SVC_E65	78.3%	71.2%	85.0%	100.0%	30.0%	35.0%
SVC_E40	76.9%	69.9%	85.0%	100.0%	30.0%	35.0%
SVC_E236	76.1%	69.2%	85.0%	100.0%	30.0%	35.0%
SVC_E46	76.0%	69.1%	85.0%	100.0%	30.0%	35.0%
SVC_E233	75.3%	65.5%	85.0%	100.0%	30.0%	35.0%
SVC_E24	74.0%	67.3%	85.0%	100.0%	30.0%	35.0%
SVC_E52	70.1%	63.7%	85.0%	100.0%	30.0%	35.0%
	#N/A	#N/A	85.0%	100.0%	30.0%	35.0%

	AEP Incumbent Data ($000)[1]						Survey Results ($000)[2]								
AEP Job	**Base Salary**	**Target STI %**	**Target STI $**	**Target TCC**	**Target LTI**	**Target TC**	**Base**	**Target STI %**	**Target STI $**	**Target TCC**	**Target LTI**	**Target TC**	**% Difference AEP Target TC vs Survey Target TC**	**% Difference AEP Target TCC vs Survey TC**	**% Difference AEP Base vs Survey TC**
Executive Chair	$1,150,000	135%	$1,552,500	$2,702,500	$2,000,000	$4,702,500	$1,196,000	110.0%	$1,315,600	$2,288,000	$1,641,640	$3,929,640	19.7%	-31.2%	-70.7%
President & CEO	$1,200,000	140%	$1,680,000	$2,880,000	$8,000,000	$10,880,000	$1,355,074	145.0%	$1,964,858	$3,237,000	$9,550,732	$12,787,732	-14.9%	-77.5%	-90.6%
EVP CFO	$700,000	80%	$560,000	$1,260,000	$1,700,000	$2,960,000	$735,773	88.0%	$647,480	$1,381,144	$1,908,333	$3,289,477	-10.0%	-61.7%	-78.7%
EVP General Counsel&Secretary	$746,000	75%	$559,500	$1,305,500	$1,500,000	$2,805,500	$687,900	80.0%	$550,320	$1,219,900	$1,518,500	$2,738,400	2.5%	-52.3%	-72.8%
EVP Portfolio Optimization	$619,500	80%	$495,600	$1,115,100	$1,300,000	$2,415,100	$733,900	50.0%	$366,950	$1,100,800	$1,216,900	$2,317,700	4.2%	-51.9%	-73.3%
E6	$585,000	80.0%	$468,000	$1,053,000	$1,200,000	$2,253,000	$650,500	80.0%	$520,400	$1,198,100	$1,273,800	$2,471,900	-8.9%	-57.4%	-76.3%
E7	$585,000	80.0%	$468,000	$1,053,000	$1,200,000	$2,253,000	$650,500	80.0%	$520,400	$1,198,100	$1,273,800	$2,471,900	-8.9%	-57.4%	-76.3%
E8 [3]	$659,000	75%	$494,250	$1,153,250	$1,000,000	$2,153,250	$552,900	60.0%	$331,740	$1,017,400	$906,800	$1,924,200	11.9%	-40.1%	-65.8%
E9	$557,000	80.0%	$445,600	$1,002,600	$1,100,000	$2,102,600	$650,500	80.0%	$520,400	$1,198,100	$1,273,800	$2,471,900	-14.9%	-59.4%	-77.5%
E10	$535,000	75%	$401,250	$936,250	$1,000,000	$1,936,250	$570,600	68.0%	$388,008	$969,400	$770,800	$1,740,200	11.3%	-46.2%	-69.3%
E11	$410,000	57.5%	$235,750	$645,750	$344,000	$989,750	$286,300	40.0%	$114,520	$403,300	$218,400	$621,700	59.2%	3.9%	-34.1%
E12	$526,000	75%	$394,500	$920,500	$832,000	$1,752,500	$521,500	60.0%	$312,900	$849,400	$837,500	$1,686,900	3.9%	-45.4%	-68.8%
E13	$551,500	70%	$386,050	$937,550	$900,000	$1,837,550	$377,000	48.0%	$180,960	$552,100	$315,970	$868,070	111.7%	8.0%	-36.5%
E14	$450,000	50%	$225,000	$675,000	$344,000	$1,019,000	$371,800	40.0%	$148,720	$538,900	$270,600	$809,500	25.9%	-16.6%	-44.4%
E15	$360,500	50%	$180,250	$540,750	$344,000	$884,750	$399,500	50.0%	$199,750	$590,300	$310,600	$900,900	-1.8%	-40.0%	-60.0%
E16	$444,500	50%	$222,250	$666,750	$344,000	$1,010,750	$412,300	50.0%	$206,150	$628,700	$438,000	$1,066,700	-5.2%	-37.5%	-58.3%
E17	$423,500	50%	$211,750	$635,250	$344,000	$979,250	$410,300	45.0%	$184,635	$577,100	$296,500	$873,600	12.1%	-27.3%	-51.5%
E18	$435,000	57.5%	$250,125	$685,125	$344,000	$1,029,125	$367,002	43.0%	$157,811	$513,803	$265,702	$779,505	32.0%	-12.1%	-44.2%
E19	$342,000	45%	$153,900	$495,900	$300,000	$795,900	$320,900	40.0%	$128,360	$436,800	$230,500	$667,300	19.3%	-25.7%	-48.7%
E20	$277,366	40%	$110,946	$388,312	$146,685	$534,997	$348,400	43.0%	$149,812	$500,800	$161,300	$662,100	-19.2%	-41.4%	-58.1%
													11.5%	**-38.5%**	**-62.8%**

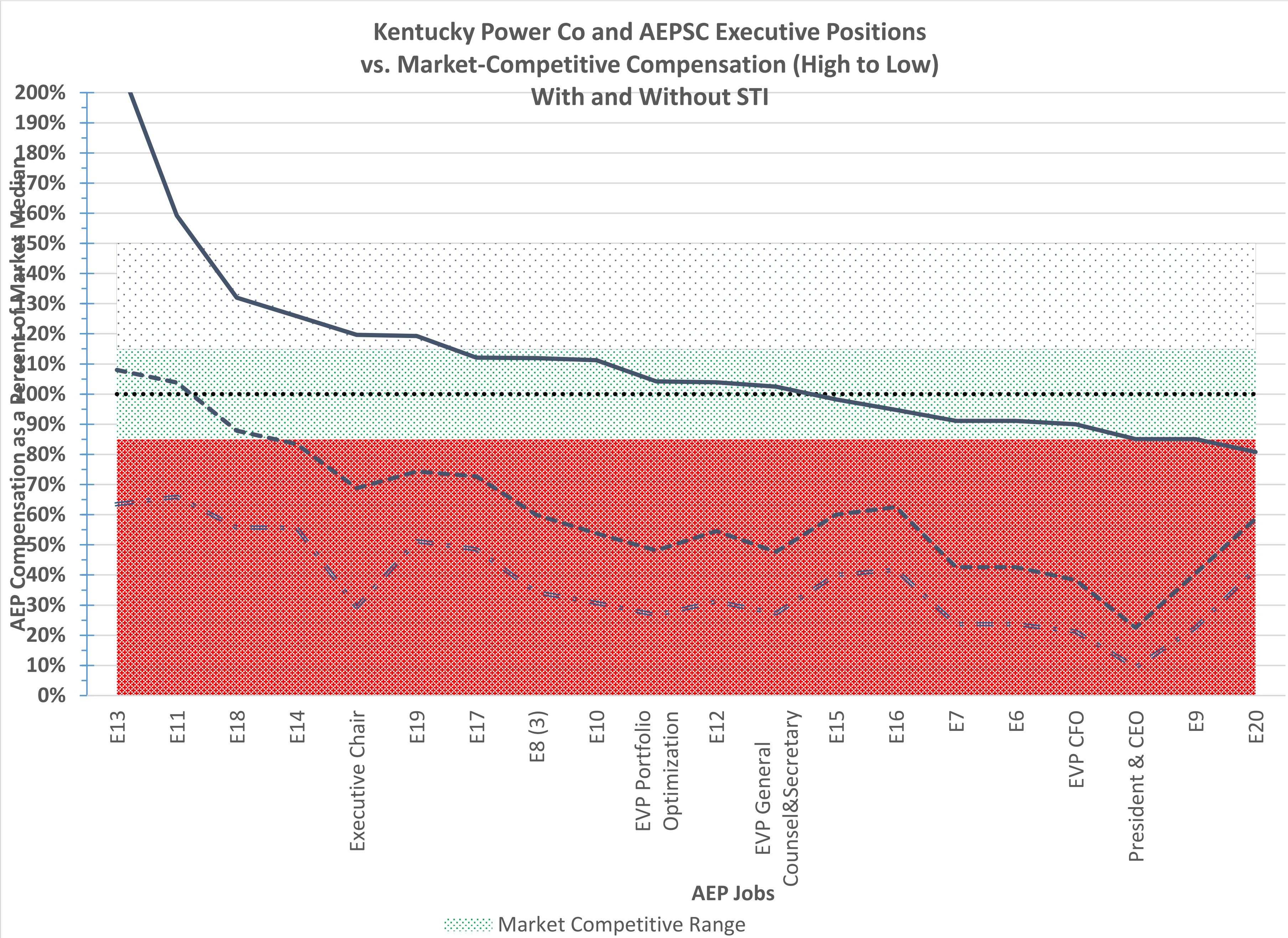
Notes:

(1) AEP data as of March 31, 2023

(2) Median AEP Compensation Peer Group data from April 1, 2022 Towers Watson Energy Services Executive Survey, 2022 Towers Watson General Industry Executive Survey, or proxy filings (unless otherwise noted), in either case aged to March 31, 2023 at 4% annual rate.

(3) Position benchmarked at 75th percentile

(4) A market competitive range of +/- 15 percent has been used for all executive positions.


Kentucky Power Co and AEPSC Executive Positions
vs. Market-Competitive Compensation (High to Low)
With and Without STI
AEP Compensation as a Percent of Market Median
200%
190%
180%
170%
160%
150%
140%
130%
120%
110%
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
E13
E11
E18
E14
Executive Chair
E19
E17
E8 (3)
E10
EVP Portfolio Optimization
E12
EVP General Counsel&Secretary
E15
E16
E7
E6
EVP CFO
President & CEO
E9
E20
AEP Jobs
Market Competitive Range

AEP Job	AEP Target TC vs. Survey Target TC	AEP Target TCC vs. Survey Target TC	AEP Target Base vs. Survey Target TC	Market Low	Market Median Compensation	Market Competitive Range	Market Max
E13	211.7%	108.0%	63.5%	85.0%	100.0%	30.0%	35.0%
E11	159.2%	103.9%	65.9%	85.0%	100.0%	30.0%	35.0%
E18	132.0%	87.9%	55.8%	85.0%	100.0%	30.0%	35.0%
E14	125.9%	83.4%	55.6%	85.0%	100.0%	30.0%	35.0%
Executive Ch	119.7%	68.8%	29.3%	85.0%	100.0%	30.0%	35.0%
E19	119.3%	74.3%	51.3%	85.0%	100.0%	30.0%	35.0%
E17	112.1%	72.7%	48.5%	85.0%	100.0%	30.0%	35.0%
E8 (3)	111.9%	59.9%	34.2%	85.0%	100.0%	30.0%	35.0%
E10	111.3%	53.8%	30.7%	85.0%	100.0%	30.0%	35.0%
EVP Portfolio	104.2%	48.1%	26.7%	85.0%	100.0%	30.0%	35.0%
E12	103.9%	54.6%	31.2%	85.0%	100.0%	30.0%	35.0%
EVP General	102.5%	47.7%	27.2%	85.0%	100.0%	30.0%	35.0%
E15	98.2%	60.0%	40.0%	85.0%	100.0%	30.0%	35.0%
E16	94.8%	62.5%	41.7%	85.0%	100.0%	30.0%	35.0%
E7	91.1%	42.6%	23.7%	85.0%	100.0%	30.0%	35.0%
E6	91.1%	42.6%	23.7%	85.0%	100.0%	30.0%	35.0%
EVP CFO	90.0%	38.3%	21.3%	85.0%	100.0%	30.0%	35.0%
President & C	85.1%	22.5%	9.4%	85.0%	100.0%	30.0%	35.0%
E9	85.1%	40.6%	22.5%	85.0%	100.0%	30.0%	35.0%
E20	80.8%	58.6%	41.9%	85.0%	100.0%	30.0%	35.0%

2023 Utilities' ICP Scorecard

Value Driver	Metric	Weight	0.0	1.0	2.0
Safety and Compliance	Utilities' Employee DART Rate	6.0%	0.682	0.617	0.585
	Utilities' Contractor DART Rate	4.0%	0.596	0.539	0.511
	Serious Injury and Fatality (SIF) Event Sharing	6.0%	50%	75%	100%
	Contractor Safety Performance Evaluations	6.0%	50%	75%	100%
	Targeted CORE Visit Assessment	8.0%	0%	50%	100%
Workforce & Culture	Diversity, Equity & Inclusion	2.5%	0.00 improvement	0.05 improvement	0.10 improvement
	Culture Survey Participation	2.5%	2022 Participation	Varies	92%
	Labor Strategy*	7.5%	0 Milestones	1 Milestones	2 Milestones
Business Performance	Operating Earnings	10.0%	15% under	Control	15% over
	Return on Equity	10.0%	Authorized -100 bps	Authorized -50 bps	Authorized +25 bps
Affordability	JD Power Quality & Reliability (PQR) Index***	5.0%	Maintain/Decrease Score	Increase >= than peer avg.	Increase 2 times peer avg.
	JD Power Quality - Power Communications Index***	5.0%	Maintain/Decrease Score	Increase >= than peer avg.	Increase 2 times peer avg.
Operations	SAIDI Actual**	10.0%	322.24	268.44	215.75
	Forestry Management Optimization*	5.0%	No Objectives Achieved	Can Range from .20 - 1.50	All Objectives Achieved
	Electrification Strategy*	2.5%	No Objectives Achieved	3 Objectives Achieved	3 Objectives +2024 Work Plan
	Reliability Work Plans	10.0%	0%	50%	100%
		100%			

*Denotes 2023 Strategic Initiatives

* *SAIDI Individual OPCo Targets located in the Appendix

Benefit Summary

Benefit Plan	Core Program Descriptions	Administrator
Eligibility	All full-time (scheduled to work an average of 40 hours per week) employees and their eligible dependents are eligible to participate in the following benefits: group medical, dental, life, accidental death & dismemberment, sick pay, long-term disability, retirement savings (401k), retirement (pension), holiday and vacation pay. All part-time (scheduled to work an average of 20 hours per week) employees are eligible to participate in the group medical, dental, retirement savings (qualified 401k) plan and retirement (qualified pension) plan beginning the first day of service with AEP. Part-time employees are also eligible for holiday and vacation benefits according to a different schedule than full-time. Temporaries, co-ops and interns are eligible to participate in the pension plan and the qualified 401k plan.	
Medical	AEP offers three consumer-directed health plans (CDHPs). The three CDHP options are: HRA – CDHP with an AEP-funded Health Reimbursement Account (HRA). HSA Plus – CDHP with a Health Savings Account (HSA) that provides both AEP funding and optional employee funding via payroll deduction (for active employees only) or via deposits made directly to the account. HSA Basic – CDHP with an optional Health Savings Account (HSA) that allows employee funding via payroll deduction (for active employees only) or via deposits made directly to the account.	Anthem
Dental	AEP offers two dental plan options. Dental Preferred Provider Organization (DPPO) Plan: Offered in all areas. Dental Maintenance Organization (DMO) Plan: Offered in limited areas; availability is based on employee's ZIP Code.	Aetna
Life Insurance	The company provides full-time employees two times their base annual pay in life insurance at no cost to the employee with those hired after January 1, 2019, receiving one-times. Most employees can purchase up to eight times their base pay in supplemental coverage. The total amount of combined coverage for most employees cannot exceed $1 million. The employee pays the total cost of supplemental and dependent life coverage. The monthly after-tax cost for the employee supplemental life coverage is based on the employee's age, tobacco use status, the employee's base pay and the level of coverage. Some active employees, who remained in grandfathered life plans (not open to new enrollments), pay between $0.20 - $0.35 per $1,000 for coverage.	Minnesota Life
AD&D	AEP'S AD&D benefit program offers help with the financial hardship a full-time employee's family may suffer should the employee become seriously injured or die in an accident. The Company provides employees two times their base pay (up to $1.5 million) at no cost to the employee. For employees on an Emergency Response Team, the Company provides AD&D insurance of an additional two times their base pay (up to $1.5 million) at no cost to the employee. Employees can purchase up to ten times their base pay (up to $1.5 million) in supplemental coverage. Employees can purchase dependent AD&D insurance for their eligible dependents.	Minnesota Life
Sick Pay	The Sick Pay Plan provides full-time employees financial protection in the event of a short-term illness or injury that prevents employees from working. Benefits are payable for the first day of absence from work due to illness or injury and may continue up to 26 weeks. Sick pay is determined according to the amount of the employee's base pay on the day before the absence begins and is paid at 100% or 60% depending on service with the Company. The Company pays the full cost of coverage through normal salary allocations as this program is financed as a salary continuation plan.	Self-Administered

Benefit Summary

Benefit Plan	Core Program Descriptions	Administrator
Holiday	AEP provides pay for 9 holiday days per year for full-time employees and part-time employees who are regularly scheduled to work that day. An additional 24 hours of paid personal holiday time off can be scheduled by the employee with the approval from their supervisor to use throughout the year.	Self-Administered
Vacation	AEP provides paid vacation time off for all full-time and part-time employees who are scheduled to work an average of 20 hours per week. Vacation accrues based on job grade, tenure, exemption status and hours worked. Part-time employees receive one-half the annual allocation as full-time employees.	Self-Administered
Long Term Disability (LTD) & LTD Buy-Up	The AEP Long-Term Disability plan provides full-time employees financial protection in the event of an employee's illness or injury that prevents them from working for an extended period of time. To qualify for LTD benefits, the employee must be totally disabled because of illness or injury for 26 weeks (elimination period) and unable to perform the functions of their own occupation. After 2 years of approved disability, the employees must be unable to perform the duties of any occupation. The plan's monthly total disability benefit pays 60% of the employee's base monthly pay in effect immediately before the disability begins. The Company pays the full cost of this coverage. Effective January 1, 2014, eligible employees have the opportunity to purchase additional 10% coverage which is referred to as a buy-up.	Self-Administered
Vision	AEP offers comprehensive employee paid vision coverage for eye care and vision correction. AEP's Comprehensive Vision Plan provides coverage for eye exams, contacts (including disposable contacts) and eyeglass lenses and frames. It also offers discounts on special features, such as scratch-resistant lenses, laser eye surgery and more. Vision care discounts are also available through the medical plans. Proper eye care can lead to the early detection and treatment of vision-related complications. Vision plan participants can take advantage of the discounted retinal-imaging exam option; in addition, members who have Type 1 or Type 2 diabetes are eligible for a follow-up exam and additional testing two times per benefit year.	EyeMed
Savings Plan	The AEP System Retirement Savings Plan is a 401(k) savings plan that gives employees an opportunity to save through payroll deductions on a pre-tax and after-tax basis. Generally, employees can contribute from 1% to 50% of their eligible compensation on a pre-tax basis, after-tax basis, including Roth 401(k) after-tax, or in a combination of any of the contribution options, up to the limits established by the IRS. The Company adds 100% to their account for every dollar they contribute up to the first 1% and 70% for every dollar they contribute up to the next 5% each pay period. All contribution sources are eligible for the match, but the 6% limit is applied to the total amount contributed each pay period. Employees can invest in any combination of the 19 investment options available and/or the self- directed brokerage account to design their own diversified portfolio. Employees are immediately 100% vested in the value of their contributions and AEP contributions	Empower

Benefit Summary

Benefit Plan	Core Program Descriptions	Administrator
Retirement Plan (Qualified Pension Plan)	The plan provides a cash balance benefit. Each of the AEP affiliates establishes a recordkeeping account for their employees to track growth of a participant's benefit over time. The account balance grows through two annual credits: an interest credit and an annual employer company credit which is a percentage of a participant's pay, based on age and service. Employees are eligible to participate after completing one year of service with AEP. Employees are automatically enrolled in the AEP System Retirement Plan once eligible. Participants are 100% vested in their accrued benefit after three years of service. Participants of the AEP System Retirement Plan who were employed by the Company on 12/31/2000 and participants of the Central and South West Retirement Plan who were age 50 or older with at least 10 years of service as of June 30, 1997, are grandfathered in each plan's prior pension formula. Grandfathered participants receive the higher benefit from the prior formulas provided by the plans or the newer cash balance formula.	Telus Health
Post-Retirement Medical, Dental & Vision	Employees who are at least age 55 with at least 10 or more years of service when they terminate employment are eligible to enroll in retiree benefits. For benefit purposes, these employees are referred to as "retirees." Eligible retirees and their eligible dependents may elect retiree medical, dental, and vision coverage. Employees hired or rehired on or after January 1, 2014, are not eligible for retiree medical coverage. Upon an employee or retirees' death, eligible surviving spouses/dependents may continue medical, dental, and vision coverage until the dependent child(ren) reach the limiting age, or for surviving spouses of active employees, attain age 65, or remarry. Surviving spouse of retirees can continue coverage until remarriage or death. Once a surviving spouse/dependent opts out of AEP coverage for any reason, including non-payment of premiums, they lose any future eligibility for enrollment.	Anthem (Medical for under age 65), Aetna (medical for over age 65), Aetna (dental), EyeMed (vision)
Post-Retirement Life Insurance	AEP provides life insurance coverage equal to a flat $30,000 at no cost to eligible retired employees (at least age 55 with 10 or more years of service at the time of termination). Certain grandfathered retirees are eligible for additional coverage amounts, based on when they retired. Depending on their grandfathered group, some coverages may reduce as the retiree gets older. Employees hired or rehired on or after January 1, 2011, are not eligible for company-paid life insurance upon retirement.	Minnesota Life

January 1, 2023 - December 31, 2023

PARTICIPANT MEDICAL CONTRIBUTIONS

The pre-tax monthly cost to active full-time employees is calculated based on a percentage of the total cost of coverage. The pre-tax monthly costs to active part-time employees are two and one-half times the monthly costs of active full-time employees.

MEDICAL PLAN SURCHARGES

Spousal Surcharge

Effective January 1, 2014, if an active employee covers his/her spouse/domestic partner on AEP's medical plan, and that spouse/domestic partner has access to medical coverage through his/her employer, the employee will be assessed a surcharge of $50.00 per month.

Tobacco Surcharge

Effective January 1, 2021, a $50.00 per month tobacco surcharge applies to spouses or domestic partners enrolled in AEP medical coverage who indicate they use tobacco or nicotine products. This works in conjunction with the rule that was effective January 1, 2015, for employees who use tobacco and nicotine products will have a surcharge, in the amount of $50.00 per month, assessed when they elect coverage under AEP's medical plan.

January 1, 2023 – December 31, 2023

GROUP MEDICAL PLANS

Health Savings Account (HSA) Plan Options	HSA Basic		HSA Plus	
	In-Network	**Out-of-Network**	**In-Network**	**Out-of-Network**
Company Annual Contribution to HAS	NA	NA	participant only: $500 participant + spouse or participant + child(ren): $750 participant + family: $1,000	
Annual Deductible (includes medical, prescription and behavioral health)	$3,000/participant $6,000/participant + spouse $6,000/participant + 1 child $9,000/participant + children $9,000/participant + family	$4,000/participant $8,000/participant + spouse $8,000/participant + 1 child $12,000/participant + children $12,000/participant + family	$2,000/participant $3,000/participant + spouse $3,000/participant + child(ren) $4,000/participant + family	$3,000/participant $4,500/participant + spouse $4,500/participant + child(ren) $6,000/participant + family
Annual out-of-pocket maximum	$4,000/participant $8,000/participant + spouse $8,000/participant + 1 child $12,000/participant + child(ren) $12,000/participant+ family	$8,000/participant $16,000/participant + spouse$16,000/participant + 1 child $24,000/participant + child(ren) $24,000/participant + family	$4,000/participant $6,000/participant + spouse $6,000/participant + child(ren) $8,000/participant + family	$6,000/participant $9,000/participant + spouse $9,000/participant + child(ren) $12,000/participant + family
Co-Insurance	10% after deductible	30% after deductible	15% after deductible	30% after deductible
Preventive Care	$0%; no deductible	30% after deductible	$0%; no deductible	30% after deductible
Prescription Coverage	10% after deductible		15% after deductible	
2023 Full-Time Employee Monthly Cost	participant only $37.47 participant+spouse/domestic partner $133.32 participant + child(ren) $99.26 participant + family $195.75		participant only $97.52 participant + spouse: $277.08 participant + child(ren) $213.73 participant + family $393.28	

January 1, 2023– December 31, 2023

HRA Plan				
		Participant Only	**Participant + Spouse or Participant + Child(ren)**	**Participant + Family**
Health Reimbursement Account (HRA)	AEP Annual Allocation	$1,000	$1,500	$2,000
Traditional Health Coverage (Prescription coverage same as any other medical expense)	Annual Deductible (includes medical, prescription drug and behavioral health)	$1,500	$2,250	$3,000
	Then, employee pays coinsurance for covered services	15% for in-network providers 30% for out-of-network providers		
	Annual Out-of-Pocket Maximum	$4,000 if in-network $6,500 if out-of-network	$6,000 if in-network $9,750 if out-of-network	$8,000 if in-network $13,000 if out-of-network
Annual Preventive (not applied to Company's HRA allocation)	In-network: 0%; no deductible Out-of-network: 30% after deductible			
2023 Full-Time Employee Monthly Cost	$166.09 participant only $439.49 participant + spouse/domestic partner $343.05 participant + child(ren) $616.44 participant + family			

<u>Live Health Online</u>

Live Health Online provides employees and their eligible dependents with 24/7/365 access to US board-certified physicians by online video. Live Health Online can diagnose, recommend treatment and prescribe medication when appropriate, including sinus problem, bronchitis, allergies, poison ivy, cold and flu symptoms, urinary tract infection, respiratory infection and more. The cost to participants for each physician consultation is $59, $80 for behavioral health therapist, $95 for psychologist, and $150 for psychiatrist initial consultation and $75 for follow up consultations. This program is available to participants enrolled in an AEP health plan.

<u>Wellness Program</u>

Healthy living habits are an essential ingredient for healthy employees. For that reason, AEP sponsors a number of programs, including incentives, and initiatives designed to help employees achieve and maintain a healthy lifestyle. All active employees (regardless of whether they are enrolled in a medical plan) are eligible to participate in the following wellness programs along with spouses and domestic partners of active employees who are covered under an AEP medical plan. Rewards are offered for annual well check, dental exams, eye exam or skin cancer screening, and financial wellbeing coaching calls, diabetes prevention program, and healthy living challenges during the year.

January 1, 2023 – December 31, 2023

GROUP DENTAL

DPPO option

Coverage Level	Participant Only	Participant + Spouse	Participant + Child(ren)	Participant + Family
Deductible (does not apply to preventive service)	$50/individual	$50/individual	$50/individual $150/family	$150/Family
Annual Maximum	$1,750 per covered person			
Coinsurance				
Preventive	100%			
Basic Services	80% after deductible			
Major Services	50% after deductible			
Orthodontia	50% up to a lifetime maximum of $1,750 per covered child			

DMO Option

A DMO option is available to employees who live within the same zip code area as a network DMO dentist. Similar to a medical Health Maintenance Organization (HMO), the DMO provides dental service through a group of network dentist. The DMO offers no deductibles or annual maximum, no co-pay for covered preventive services and low, fixed co-pays on other dental services.

The pre-tax monthly costs to active part-time employees are two and one-half times the monthly costs to active full-time employees. The monthly costs to certain grandfathered retirees and surviving dependents are the same as active employees. The monthly cost to most other retirees and eligible surviving dependents are 100% of the total cost of coverage.

Employee Monthly Contribution	Employee Only	Employee + Spouse	Employee + Child(ren)	Employee + Family
DPPO Plan	$12.46	$26.75	$39.00	$53.28
DMO Plan	$8.84	$18.78	$21.26	$31.21

VISION PLAN

AEP offers comprehensive employee paid vision coverage for eye care and vision correction. AEP's Comprehensive Vision Plan provides coverage through the Fidelity Security Life Insurance Company for eye exams, contacts (including disposable contacts) and eyeglass lenses and frames. It also offers discounts on special features, such as scratch-resistant lenses, laser eye surgery and more. Vision care discounts are also available through the Anthem medical plans.

Vision plan participants can take advantage of the discounted retinal-imaging exam option; in addition, members who have Type 1 or Type 2 diabetes are eligible for a follow-up exam and additional testing two times per benefit year.

Benefits are provided through EyeMed Vision Care's Access national network of private practice optometrists, ophthalmologists, opticians and retailers, such as Sears Optical, Target Optical, most Pearle Vision locations and LensCrafters.

Employee Contribution	Employee Only $ 6.82/mth	Employee + Spouse $12.93/mth	Employee + Child(ren) $13.61/mth	Employee + Family $20.41/mth

Employee_ER Contributions

Year 2023

Full Plan Monthly Rates - Active Employees				
2023	**Single**	**EE + Sp**	**EE + Child(ren)**	**Family**
HRA	$702.77	$1,633.83	$1,352.90	$2,283.97
HSAPlus	$631.25	$1,467.56	$1,215.22	$2,051.53
HSABasic	$568.80	$1,322.37	$1,094.99	$1,848.56
Hawaii	$638.59	$1,484.63	$1,229.35	$2,075.39
Dental PPO	$31.15	$62.90	$90.12	$121.87
Dental DMO	$22.09	$44.19	$49.70	$71.80

Contribution Rates

Employee Contributions

Full-time Active Employee Share				
	Single	**EE + Sp**	**EE + Child(ren)**	**Family**
HRA	$166.09	$439.49	$343.05	$616.44
HSAPlus	$97.52	$277.08	$213.73	$393.28
HSABasic	$37.47	$133.32	$99.26	$195.75
Hawaii	$142.00	$372.18	$290.97	$521.15
Dental PPO	$12.46	$26.75	$39.00	$53.28
Dental DMO	$8.84	$18.78	$21.26	$31.21
Vision	$6.82	$12.93	$13.61	$20.41

Part-time Active Employee Share				
	Single	**EE + Sp**	**EE + Child(ren)**	**Family**
HRA	$415.23	$1,098.72	$857.62	$1,541.11
HSAPlus	$243.80	$692.69	$534.32	$983.21
HSABasic	$93.68	$333.29	$248.14	$489.38
Hawaii	NA	NA	NA	NA
Dental PPO	$31.15	$62.90	$90.12	$121.87
Dental DMO	$22.09	$44.19	$49.70	$71.80
Vision	$6.82	$12.93	$13.61	$20.41

Full-time Active Employer Subsidy				
	Single	**EE + Sp**	**EE + Child(ren)**	**Family**
HRA	$536.68	$1,194.34	$1,009.85	$1,667.53
HSAPlus	$533.73	$1,190.48	$1,001.49	$1,658.25
HSABasic	$531.33	$1,189.05	$995.73	$1,652.81
Hawaii	$496.59	$1,112.45	$938.38	$1,554.24
Dental PPO	$18.69	$36.15	$51.12	$68.59
Dental DMO	$13.25	$25.41	$28.44	$40.59

Public Exhibit ARC-10 has been redacted in its entirety.

Public Exhibit ARC-11 has been redacted in its entirety.

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

Electronic Application Of Kentucky Power Company	)	
For (1) A General Adjustment Of Its Rates For	)	
Electric Service; (2) Approval Of Tariffs And Riders;	)	
(3) Approval Of Accounting Practices To Establish	)	Case No. 2023-00159
Regulatory Assets And Liabilities; (4) A	)	
Securitization Financing Order; And (5) All Other	)	
Required Approvals And Relief	)	

DIRECT TESTIMONY OF

KAMRAN ALI

ON BEHALF OF KENTUCKY POWER COMPANY

DIRECT TESTIMONY OF
KAMRAN ALI ON BEHALF OF
KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

CASE NO. 2023-00159

TABLE OF CONTENTS

SECTION **PAGE**

EXHIBITS

EXHIBIT	DESCRIPTION
Exhibit KA-1	Transmission Project Guidelines
Exhibit KA-2	PJM M-3 Slides

DIRECT TESTIMONY OF
KAMRAN ALI ON BEHALF OF
KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

CASE NO. 2023-00159

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Kamran Ali. My business address is 8500 Smiths Mill Road, New Albany, Ohio 43054.

II. BACKGROUND

Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A. I received a Bachelor of Science – Electrical Engineering degree from the University of Alabama in Tuscaloosa, Alabama and a Master of Science –Electrical Engineering degree from Kansas State University in Manhattan, Kansas. I also received a Master of Business Administration degree from Ohio University in Athens, Ohio. I was employed by SMC Electrical in 2004 as an electrical engineer. In 2006, I joined AEP as a Substation Engineer. In 2007, I transferred to Transmission Planning, where I advanced through increasing levels of responsibility. In December 2018, I assumed the position of Managing Director, Transmission Planning, which includes organizing and managing all activities related to assessing the adequacy of AEP's transmission network to meet the needs of its customers in a reliable, cost effective, and environmentally compatible manner. In 2021, I was promoted to Vice President of Transmission Planning and Analysis.

Q. BY WHOM ARE YOU EMPLOYED AND WHAT IS YOUR POSITION?

A. I am an employee of American Electric Power Service Corporation ("AEPSC") as Vice President of Transmission Planning and Analysis. AEPSC supplies engineering, financing, accounting, planning, advisory, and other services to the subsidiaries of the American Electric Power ("AEP") system, one of which is Kentucky Power Company ("Kentucky Power" or the "Company").

Q. WHAT ARE YOUR RESPONSIBILITIES AS VICE PRESIDENT OF TRANSMISSION PLANNING AND ANALYSIS?

A. The Transmission Planning and Analysis organization assesses the adequacy of the transmission grid and recommends capital projects and mitigation plans in coordination with Regional Transmission Organizations ("RTOs") and other stakeholders for the benefit of the customers of Kentucky Power and the other utilities in the AEP System.

As the Vice President of Transmission Planning and Analysis, I organize and manage all activities related to assessing the adequacy of AEP's transmission network to meet the needs of its customers in a reliable, cost effective, and environmentally compatible manner of our over 40,000 circuit miles of transmission lines across 13 states and four RTOs.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE ANY REGULATORY COMMISSIONS?

A. Yes. I have testified before this Commission, the Indiana Utility Regulatory Commission, the Michigan Public Service Commission, the Maryland Public Service

Commission, and the Pennsylvania Public Utility Commission on behalf of various AEP electric operating companies.

III. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to describe the transmission system that is necessary for Kentucky Power to provide retail service to its customers, and to provide a factual background for the costs incurred by Kentucky Power pursuant to wholesale transmission rates approved by the Federal Energy Regulatory Commission ("FERC") under the PJM Open Access Transmission Tariff ("PJM OATT").

Q. ARE YOU SPONSORING ANY EXHIBITS OR SCHEDULES?

A. Yes, I am sponsoring the following Exhibits:

- Exhibit KA-1 Transmission Project Guidelines
- Exhibit KA-2 PJM M-3 Slides

IV. KENTUCKY POWER'S TRANSMISSION SYSTEM

Q. PLEASE DESCRIBE KENTUCKY POWER'S TRANSMISSION SYSTEM.

A. Kentucky Power's transmission system is a highly networked grid that delivers electricity from generation sources to retail and wholesale consumers Kentucky Power serves.

There are approximately 1,263 circuit miles of transmission lines in the Kentucky Power system, connecting current Kentucky Power generation sources from within and outside the Company's service territory.

The voltage levels of Kentucky Power's transmission system range from 34.5 kV to 765 kV and can be divided into three categories based on voltage level: extra high voltage (EHV) (above 200 kV), transmission (100 kV to 200 kV), and subtransmission (34.5 kV to 100 kV). Finally, Kentucky Power transmission system includes approximately 58 transmission substations.

Q. PLEASE EXPLAIN HOW KENTUCKY POWER'S TRANSMISSION SYSTEM IS INTERCONNECTED WITH THE TRANSMISSION SYSTEM OF OTHER ELECTRIC UTILITIES.

A. The Kentucky Power transmission system is part of the PJM RTO and is interconnected with the AEP Transmission System and the AEP Zone in PJM, as well as with Eastern Kentucky Power Company ("EKPC"). Kentucky Power's transmission system is also interconnected with Kentucky Utilities, various rural electric cooperatives, and municipal electric utilities, which are not members of PJM.

Q. PLEASE DESCRIBE THE OVERALL CONDITION OF KENTUCKY POWER'S TRANSMISSION PLANT.

A. The Company's transmission facilities are built and maintained in accordance with AEP standards that are based on industry regulations and Good Utility Practices.[1] Like other members of our industry, the Company is addressing the challenges of aging

[1] FERC has defined "Good Utility Practice" in Section 1.14 of the pro forma Open Access Transmission Tariff in Order 888 as: "Any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region."

infrastructure along with the need to modernize transmission facilities, comply with regulations, and adapt to a changing generation portfolio.

Specifically, The AEP transmission system, of which Kentucky Power's system is an integrated part, has evolved over the last century. In the recent past, the majority of transmission investment has been directed towards constructing facilities to address RTO-identified constraints due to a shift in generation portfolio. In addition, some investment has focused on connecting new demand while maintaining compliance with changing federal and regional reliability standards.

More recently, investment has been refocused to address aging grid infrastructure and resilience, to maintain and improve reliability, and to protect the grid from physical and cyber threats. Finally, Kentucky Power expects that the transmission system will continue to evolve and change through technological advancements such as the adoption of electric vehicles, integration of renewable resources, energy storage, changes in generation from an increasing number of fuel sources, and the implementation of new customer programs, just to name a few.

Q. IS KENTUCKY POWER'S TRANSMISSION SYSTEM CURRENTLY ADEQUATE TO SERVE ITS CUSTOMERS' LOAD RELIABLY?

A. Yes. Kentucky Power's transmission system is compliant with all federal and regional reliability standards. Kentucky Power will continue to invest appropriately in its transmission assets to provide reliable electric service to its customers. To that end, the Company needs to continue to invest in the needs across its system, primarily to address aging infrastructure and to ensure adequate capacity is available to serve the Kentucky Power customers.

Q. PLEASE PROVIDE AN OVERVIEW OF THE CURRENT TRANSMISSION INVESTMENT PRACTICES FOR KENTUCKY POWER.

A. Consistent with the Commission's January 13, 2020, Order in Case No. 2020-00174, Kentucky Power no longer involves AEP Kentucky Transmission Company ("Kentucky Transco") in upgrades required to be made to Kentucky Power's transmission network. In recent years Kentucky Power has continued to invest in its transmission system in order to provide service to its customers.

Presently, there are no new transmission projects contemplated to be undertaken by Kentucky Transco involving Kentucky Power's transmission assets.

Q. ARE KENTUCKY POWER'S TRANSMISSION ASSETS AGING?

A. Yes. Kentucky Power's transmission assets are aging. At present, Kentucky Power's average conductor age is roughly 51.1 years of service. Additionally, over 358 line-miles are 60 years of age or older, and of these line miles, over 274 are over 70 years old. The anticipated average useful life of conductor is 70 years; therefore, there will be a need to replace these assets at some point before their inevitable degradation starts impacting the reliability of the system.

Q. HOW ARE KENTUCKY POWER AND AEP ADDRESSING THE ISSUE OF AGING TRANSMISSION INFRASTRUCTURE?

A. Planning and operation of the transmission system are integrated through the coordinated efforts of PJM and AEP's transmission personnel ("AEP Transmission"). Although asset age is an important consideration, Kentucky Power and AEP Transmission develop transmission projects based on a number of factors, including the performance and condition of each asset, as well as the risk that the failure of each asset poses to the system and connected customers.

As the Kentucky Power infrastructure continues to age, the associated risk for any given asset increases. Kentucky Power and AEP Transmission are implementing solutions to address these needs on the system. As I will further discuss below, Kentucky Power and AEP Transmission are actively involved in transmission projects internally and through the open transmission planning process at PJM with stakeholder input and FERC oversight.

Q. HOW ARE KENTUCKY POWER AND AEP ADDRESSING THE ISSUE OF ENSURING ADEQUATE GENERATION CAPACITY IS AVAILABLE TO SERVE THE COMPANY'S CUSTOMERS FROM A TRANSMISSION PERSPECTIVE?

A. I am informed by Company Witness West that Kentucky Power is a net importer of energy and capacity as its customer load is greater than the capacity and energy available from its own generation resources. Additionally, with the reduction of available energy and capacity due to Kentucky Power's interest in the Mitchell Generation facility terminating in 2028, the Company will further rely on its transmission infrastructure to supply safe and reliable generation to its customers, primarily from generation resources outside of Kentucky Power's own service territory. Kentucky Power is making investments to expand and harden its transmission system to ensure it can safely and reliably import the energy and capacity it requires to service its customers.

V. PJM INTERCONNECTION

Q. WHAT IS PJM?

A. FERC Order 2000 introduced the concept of an RTO or Independent System Operator ("ISO") whose purpose is to promote the regional administration of high voltage transmission networks and ensure non-discriminatory access to transmission systems.

PJM Interconnection is a FERC-approved RTO that coordinates and administers the movement of wholesale electricity in all or parts of thirteen states and the District of Columbia. The Commission approved Kentucky Power's transfer of functional operation of its transmission facilities to PJM by its Order dated May 19, 2004, in Case No. 2002-00475.

The AEP System–East Zone ("AEP Zone"), which includes Kentucky Power, integrated its operations with PJM and began participating in the PJM energy market on October 1, 2004. Kentucky Power's membership in PJM has allowed Kentucky Power's customers to benefit from the independent, regionally operated, and jointly planned and coordinated PJM transmission grid. This grid enhances system reliability and security, competitive wholesale markets, and resource diversity.

Q. HOW DO PJM AND AEP COORDINATE PLANNING AND OPERATION OF KENTUCKY POWER'S TRANSMISSION SYSTEM?

A. Kentucky Power's transmission system is part of the AEP eastern transmission system, which consists of the transmission facilities of eleven AEP operating or transmission companies including Kentucky Power. This expansive system allows the economical and reliable delivery of electric power for all AEP customers, including Kentucky Power's customers.

As noted above, Kentucky Power's management collaborates with the AEP Transmission team to ensure that the transmission planning and operation requirements of Kentucky Power are met reliably, effectively, and efficiently.

Kentucky Power is fully involved in the transmission planning process for facilities in its service territory. This involvement focuses, among other areas, in ensuring that Kentucky Power's planned investments in its transmission facilities are reasonable and beneficial for Kentucky Power's customers. Kentucky Power has ultimate authority over the approval of planned investments in its transmission system.

At an AEP Transmission System level in PJM (i.e., comprising not only Kentucky Power's transmission facilities, but also those of its affiliates in the PJM AEP Zone) the transmission planning process is a collaborative process involving AEP Transmission and its stakeholders, including Kentucky Power. Kentucky Power, conducted within the context of PJM's broader transmission planning, which is regulated by FERC. While Kentucky Power has no control over either the needs, nor the operational and long-term capital expenditure decisions of other AEP affiliates, the AEP Transmission team works together with each operating company in the PJM AEP Zone to identify needed investments on their transmission systems and optimize capital expenditures.

Kentucky Power prioritizes investments based on the urgency of the need, the impact on customers, and cost, among other factors. Kentucky Power specifically approves transmission investments pursuant to internal procedures and controls. In this way, Kentucky Power makes sure that planned transmission investments will address its customers' needs, in terms of both maintaining reliable service and meeting the needs of expected new load. While Kentucky Power maintains a long-term view of its transmission capital investments, under particular circumstances it may be required to address immediate and pressing need over a shorter planning period. The level of Kentucky Power's transmission investment is affected by a wide variety of factors, including the size, age, type and location of its transmission grid, but ultimately it is driven by the operational and reliability requirements of its transmission grid, and limited by the amount of capital Kentucky Power can invest, given its financial metrics and access to capital over any given period. Kentucky Power aims to balance maximizing the use of its existing facilities, taking advantage of opportunities for efficiency, and making timely investments in its transmission system as needs arise (some anticipated several years in advance, others identified more recently), to the benefit of its customers.

AEP Transmission, on behalf of Kentucky Power and its other affiliates, works closely with neighboring utilities, other interconnected entities, and PJM to plan and operate the transmission grid. RTOs align the transmission planning and operating requirements set out in each RTO's protocols and operating criteria, as further defined through North American Electric Reliability Corporation ("NERC") requirements. This broader level of coordination is regionally beneficial to customers across PJM, supporting the availability of resources across the PJM footprint, facilitating market efficiency, increasing reliability, providing flexibility, resilience, and reliability, and increasing the ability of all entities serving end-use customers in PJM (such as Kentucky power's retail customers) to adapt to changing market conditions and benefit from a more efficient use of resources regionally in a wide variety of circumstances and under a wide variety of constraints. Access to this transmission system also protects Kentucky Power's customers from increased volatility in energy costs related to variances in weather, disruption to resource or supply chains, and changes in environmental requirements, among very many other factors.

VI. TEST YEAR TRANSMISSION OATT EXPENSES

Q. WHAT ARE THE COMPANY'S TRANSMISSION OATT EXPENSES INCLUDED IN THE COMPANY'S COST OF SERVICE?

A. As provided by Company Witness Walsh, PJM Network Integration Transmission Service ("NITS") charges the included in Company's cost of service are $128.2 million. In addition, the Company included $8.1 million in non-NITS[2] costs in its cost of service.

Q. WHAT IS DRIVING THE INCREASE IN TRANSMISSION OATT EXPENSES FOR KENTUCKY POWER?

A. The increase in transmission OATT expenses is being driven by investment in transmission infrastructure throughout the AEP Zone. In recent history, transmission investment was focused on system needs arising from retirement of generation due to environmental regulations.

As previously described, the transmission system currently requires substantial investment to address aging infrastructure, cyber and physical security threats, and modernization of protection and control equipment. This requires infrastructure improvements occurring both within Kentucky Power's service territory and the

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[2] Non-NITS charges are comprised of Transmission Enhancement Charges and PJM administration fees.

remainder of the AEP Zone. The costs associated with these investments are billed to the AEP Zone and charged to Kentucky Power through the monthly PJM bill and the AEP Transmission Agreement. Company Witness Burkholder discusses the PJM billing process and the AEP Transmission Agreement further in his testimony.

Q. ARE PROJECTS WITHIN THE AEP ZONE THE ONLY PROJECT TYPE CONTRIBUTING TO TRANSMISSION CHARGES FROM PJM?

A. No. Transmission projects that solely benefit the AEP Zone are fully allocated to all LSEs in the AEP Zone, including Kentucky Power, and these costs are included in NITS charges. As previously discussed above, the cost of baseline transmission projects that benefit more than one PJM zone are shared over the larger PJM footprint as determined by PJM. As a result, Kentucky Power may incur costs from multi-zonal projects, which are included in non-NITS charges.

Q. IS THE NEED FOR TRANSMISSION INFRASTRUCTURE INVESTMENT UNIQUE TO KENTUCKY POWER, AEP, OR PJM?

A. No. Industry wide, utilities are investing in the transmission system to meet the above-described needs. Nationally, transmission investment has increased over the past 10 years. The Company expects robust levels of investment will continue.

Q. ARE TRANSMISSION OATT EXPENSES NECESSARY?

A. Yes. As explained more in detail by Company Witness Burkholder, transmission OATT expenses are subject to FERC's oversight, and are charged pursuant to rates on file with FERC and are calculated using a methodology that FERC has determined to result in just and reasonable rates.

At a more practical level, these costs are a necessary to maintain the reliability of the transmission grid and ensure open and fair access by all users of the transmission system.

VII. TRANSMISSION PLANNING

Q. PLEASE DESCRIBE THE PJM REGIONAL TRANSMISSION EXPANSION PLAN ("RTEP") PROCESS.

A. The PJM RTEP process is a 24-month planning process that identifies reliability issues over a 15-year horizon. The 24-month planning process consists of overlapping 18-month planning cycles to identify and develop shorter lead-time transmission upgrades and one 24-month planning cycle to provide sufficient time for the identification and development of longer lead-time transmission upgrades that may be required to satisfy planning criteria.

AEP Transmission participates on Kentucky Power's behalf in the PJM planning process, which is guided by NERC reliability standards, PJM planning procedures and AEP planning criteria. The process results in three different categories of projects: Baseline Upgrades, Network Upgrades and Supplemental Upgrades (also called "Owner Projects"). Each category is described below.

The first project category is Baseline Upgrades. Using the aforementioned planning criteria and procedures, PJM and Kentucky Power, in conjunction with AEP Transmission, identify needs that are a result of a criteria violation. Baseline projects include transmission expansions or enhancements that are required to achieve compliance with respect to PJM's system reliability, operational performance, or market efficiency requirements as determined by PJM's Office of the Interconnection, as well as projects that are needed to meet Transmission Owners' local transmission planning criteria. The cost of Baseline Upgrades are allocated to the benefiting zones based on the following mechanisms:

- 345 kV single-circuit or lower voltage facilities are cost allocated based on solution-based distribution factors ("DFAX").
- The costs of a 345 kV double-circuit or higher voltage facilities are allocated as follows:
    - o 50% of project costs are allocated to all PJM zones based on load ratio share (the AEP Zone load share percentage for January to December 2020 is 14.18%).
    - o 50% of project costs are allocated on DFAX basis.
- For market efficiency projects, Net Load Payment savings is used instead of DFAX to determine cost allocation. Net Load Payment savings is the net present value sum of energy and capacity market benefits for all benefiting transmission zones.

The second project category is Network Upgrades. These transmission projects result from transmission customer requests for generator interconnection, merchant transmission additions, and long-term transmission service. Customers that cause the need for Network Upgrades are responsible for the costs that are incurred. As an example, if a generator requested to connect to a transmission line and an upgrade was required to connect the generator, the generator would pay for the network upgrade.

The third project category is Owner Projects. These projects are needed for many reasons, including regulatory requirements, modernization and hardening of the grid, replacement of failed equipment, proactive replacement of deteriorating assets prior to failure and improved operational efficiency and performance. The costs of Owner Projects are allocated to the transmission zone in which they are built.

Q. DO KENTUCKY POWER AND OTHER TRANSMISSION OWNERS IN THE AEP ZONE FOLLOW SPECIFIC GUIDELINES TO DETERMINE THE NECESSITY OF OWNER PROJECTS?

A. Yes. All AEP affiliated transmission owners follow an established and detailed protocol (presented as Exhibit KA-1 and referred to herein as "the Guidelines") to evaluate and select Owner Projects that assures only projects that are needed in each transmission owner's service territory are pursued.

The Guidelines discuss the drivers or inputs that should be considered when evaluating transmission system needs. They ensure that all AEP affiliated transmission owners are applying consistent criteria in evaluations, while each Transmission Owner ultimately determines the mix of Owner Projects needed to maintain the reliability of their transmission grid within the AEP Zone.

Q. WHAT DRIVERS OR INPUTS DOES KENTUCKY POWER CONSIDER IN IDENTIFYING OWNER PROJECTS?

A. Consistent with the Guidelines, the drivers considered in identifying Owner Projects include:

- Equipment Condition, Performance and Risk: These are investments made to ensure the safe and reliable operation of the transmission system. The decision to pursue such projects can be based on equipment performance, obsolescence and expected life concerns, equipment condition, reliability impact, maintenance costs, environmental impact and engineering recommendations.

- Operational Flexibility and Efficiency: These projects can optimize system configuration, lower equipment duty cycles, reduce the impact on and limit the exposure to customers for planned or forced outages and can facilitate improved restoration times. They also provide opportunities to bring the system up to current standards and design principles.
- Infrastructure Resilience: These projects can improve system ability to anticipate, absorb, adapt to and/or rapidly recover from disruptive natural or man-made events including severe weather, geo-magnetic disturbances and physical and cyber security challenges.
- Customer Service: These projects accommodate new, increasing or future load so that the system can reliably address customer needs.
- Other Drivers: Examples include industry recommendations, changes in established standards, state policy objectives, etc.

Q. ARE THESE DRIVERS UNDER KENTUCKY POWER'S CONTROL?

A. No. Although Kentucky Power commits significant resources to reduce safety risks, maintain transmission assets consistent with industry practices, and plan capital investment to increase reliability performance, many of the drivers of Owner Projects are outside of Kentucky Power's control and include regulatory requirements, interconnection requests, asset performance, and the need for modernization of protection and control systems.

Transmission Owners also do not have discretion to decline to make reasonable and necessary investments in the transmission grid. Rather these investments must be made to fulfill Kentucky Power's obligation to operate pursuant to Good Utility Practice and to serve customers. Each Transmission Owner in the AEP Zone, including Kentucky Power affiliates, has an obligation to ensure capital investments are prudent and necessary to maintain a reliable transmission grid.

Q. IS THE DESIGNATION OF A PROJECT AS A BASELINE OR OWNER PROJECT INDICATIVE OF WHETHER THE PROJECT IS NECESSARY, OR HOW NECESSARY IT IS?

A. No, it is not. The designation of a project as a Baseline or Owner Project is not indicative of the level of, or absence of, need for the project. Instead, the designations simply reflect that the project addresses different system reliability and resilience needs.

The criteria for designation as an Owner or Baseline Project are not mutually exclusive, and a single project can be needed under either or both. Under the existing PJM RTO framework, Transmission Owners retain planning responsibility for managing the maintenance and replacement of their transmission assets and planning of their local transmission systems.

PJM planning criteria address the expansion and enhancement of transmission facilities required to meet national and regional planning criteria. Owner Projects improve or preserve a PJM Transmission Owner's ability to provide reliable service to its customers, consistent with its obligation to serve, and are grounded in Good Utility Practice.

Q. DOES PJM FACTOR THE AGE OR CONDITION OF EQUIPMENT INTO ITS FORWARD-LOOKING MODELS FOR SYSTEM RELIABILITY THAT ARE USED TO IDENTIFY BASELINE PROJECTS?

A. No, it does not. The forward-looking models that PJM and Transmission Owners employ to identify Baseline Projects assume the modeled system will perform as designed without regard to the age or actual condition of all the elements of the transmission system.

This means that for modeling purposes, a substation with 75-year-old components that are deteriorating is assumed to function as designed and with the same reliability as a five-year-old substation with newer components.

Q. WHAT IS PJM'S ROLE IN REVIEWING OWNER PROJECTS?

A. All projects affecting the topology of the grid, whether PJM identified or Transmission Owner identified, are subject to the stakeholder process within PJM. While PJM does not formally "approve" Owner Projects, these projects are submitted to PJM and reviewed with the Transmission Expansion Advisory Committee ("TEAC") and Subregional RTEP Committee – Western on a periodic basis in accordance with PJM's regional planning process regulated by FERC (the "M-3 Process", which is applicable to Owner Projects). All TEAC and Subregional RTEP Committee – Western meetings are open and any transmission stakeholder can attend and participate.

Stakeholder input regarding specific projects is vetted through this PJM committee meeting process. Exhibit KA-2 contains presentation slides on Kentucky Power Owner Projects that were reviewed at the Subregional RTEP Committee – Western on April 8, 2021. As shown on Exhibit KA-2, Owner Projects are subject to multiple rounds of review and detailed project information, including needs and alternative solutions, is provided to stakeholders.

The M-3 Process ensures stakeholders have an opportunity to review Owner Projects, and includes the following meetings and posting requirements:

- Separate stakeholder meetings to discuss:
  - Models, criteria, and assumptions used to plan Owner Projects (Assumptions Meeting);
  - Need underlying Owner Projects (Needs Meeting); and,
  - Proposed solutions to meet those needs (Solutions Meeting).
- Posting of criteria, assumptions, and models at least 20 calendar days prior the Assumptions Meeting;
- Posting of criteria violations and drivers at least ten days in advance of the Needs Meeting;
- Posting of proposed solutions and alternatives identified by the PJM Transmission Owners or stakeholders at least ten days in advance of the Solutions Meeting; and,
- A process to submit concerns at least ten days before the Local Plan is integrated into the RTEP for PJM Transmission Owner review and consideration.

Q. HOW DO STAKEHOLDERS PROVIDE INPUT AS PART OF THE M-3 PROCESS?

A. The previously described meeting and posting requirements provide multiple opportunities for stakeholders to comment on assumptions, provide input on additional needs, and propose alternative solutions for PJM Transmission Owners to consider.

First, they can do so verbally in the various stakeholder meetings. Each of these meetings is moderated by PJM. Second, written submissions can be submitted to PJM and posted using the PJM Planning Community Tool. These posts, along with responses provided by AEP Transmission, are available to the public. If discussions necessitate a change to materials that have been provided by AEP, the revised materials are posted as well.

Q. DO KENTUCKY POWER AND AEP CONSIDER STAKEHOLDER INPUT?

A. Yes, Kentucky Power and AEP consider all input provided by stakeholders. Transmission Owners have an obligation to provide sufficient transparency for stakeholders to understand the Transmission Owner's Needs and Solutions. Stakeholders, on the other hand, have an obligation to advise of their Needs and Solutions for consideration by the Transmission Owner before Owner Projects are finalized and submitted to PJM for inclusion into the RTEP.

Additionally, Kentucky Power and AEP Transmission include stakeholders that are directly impacted by a given project in the project's development and prior to its submission as a Solution to PJM stakeholders to ensure that those direct impacts are considered in identifying and evaluating proposed Solutions. Additionally, Kentucky Power and AEP Transmission include stakeholders that are directly impacted by a given project in the project's development and prior to its submission as a Solution to PJM stakeholders to ensure that those direct impacts are considered in identifying and evaluating potential Solutions. For example, Kentucky Power and AEP Transmission communicate and coordinate with customers that are directly connected to a transmission line that may need to be rebuilt during the development of the proposed Solution for that Need.

Kentucky Power and AEP Transmission also coordinate with such stakeholders in scheduling any outages required for the project in order to minimize outage impacts. Thus, Kentucky Power and AEP consider input from directly affected stakeholders not only during the M-3 Process, but also before a solution is presented in that forum.

Q. WHAT ARE NON-TOPOLOGY PROJECTS?

A. There are elements of many projects that either do not change the transmission grid's topology, or that are implicit in the description of larger projects, and that are not required to be submitted to PJM for explicit review because such project elements do not affect the transmission grid analysis within the framework of PJM's FERC-approved planning process. Nevertheless, these project elements nevertheless are essential to the larger projects that are submitted to and reviewed by PJM.

Non-topology projects are required for important operational functions such as protecting against security threats, minimizing equipment damage, reducing outage durations, and improving safety, as well as many others. Non-topology changing projects can include station security, remote control and monitoring (also known as Supervisory Control and Data Acquisition or "SCADA") or telecommunications modernization projects, among other examples.

As a specific example, AEP has historically used leased analog lines to provide communication paths for system protection and control. As phone companies move to digital technology, the analog signals and communication paths will no longer function going forward.

In order to address this issue, AEP's telecom network is being upgraded through use of fiber communication paths and microprocessor relays. Although these projects do not affect any load flow model used by PJM, they are still necessary for the continued safe, efficient, secure, and reliable operation of the transmission grid.

VIII. CONCLUSION

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

VERIFICATION

The undersigned, Kamran Ali, being duly sworn, deposes and says he is the Vice President of Transmission Planning and Analysis for American Electric Power Service Corporation, that he has personal knowledge of the matters set forth in the foregoing testimony and the information contained therein is true and correct to the best of his information, knowledge, and belief after reasonable inquiry.

Kamran Ali
Kamran Ali

Commonwealth of Kentucky)
) Case No. 2023-00159
County of Boyd)

Subscribed and sworn to before me, a Notary Public in and before said County and State, by Kamran Ali, on June 22, 2023.

Scott E Bishop
Notary Public

SCOTT E. BISHOP
Notary Public
Commonwealth of Kentucky
Commission Number KYNP32110
My Commission Expires Jun 24, 2025

My Commission Expires June 24, 2025

Notary ID Number KYNP 32110

AEP Transmission Planning Criteria and Guidelines for End-Of-Life and Other Asset Management Needs

December 2020

Document Control

Document Review and Approval

Action	Name(s)	Title
Prepared by:	Jomar M. Perez	Manager, Asset Performance and Renewal
Approved by:	Nicolas Koehler	Director, East Transmission Planning
Approved by:	Wayman L. Smith	Director, West Transmission Planning
Approved by:	Kamran Ali	Managing Director, Transmission Planning

Review Cycle

Quarterly	Semi-annual	Annual	As Needed
			X

Revision History

Version	Revision Date	Changes	Comments
1.0	01/04/2017	N/A	1st Release
2.0	1/18/2018	Format Update	2nd Release
3.0	11/09/2018	Content Additions	3rd Release
4.0	12/14/2020	End-Of-Life Criteria	4th Release

Table of Contents

1.0 Introduction

The American Electric Power (AEP) transmission system consists today of approximately 40,000 miles of transmission lines, 3,600 stations, 5,000 power transformers, 8,000 circuit breakers, and operating voltages between 23 kV and 765 kV in three different RTOs – the Electric Reliability Council of Texas (ERCOT), the PJM Interconnection (PJM), and the Southwest Power Pool (SPP), connecting over 30 different electric utilities while providing service to over 5.4 million customers in 11 different states.

AEP's interconnected transmission system was established in 1911 and is comprised of a very large and diverse combination of line, station, and telecommunication assets, each with its own unique installation date, design specifications, and operating history. As the transmission owner, it is AEP's obligation and responsibility to manage and maintain this diverse set of assets to provide for a safe, adequate, reliable, flexible, efficient, cost-effective and resilient transmission system that meets the needs of all customers while complying with Federal, State, RTO and industry standards. This requires, among other considerations, that AEP determine when the useful life of these transmission assets is coming to an end and when the capability of those assets no longer meets current needs, so that appropriate improvements can be deployed. AEP refers to these issues as transmission owner identified needs that address condition, performance and risk. AEP identifies these needs through the transmission planning criteria and guidelines outlined in this document. Specifically, this document constitutes the AEP transmission planning criteria and guidelines for End-Of-Life and other asset management needs as required in the FERC-approved Attachment M-3 to the PJM Tariff. AEP does not address any End-Of-Life or other asset management needs through the baseline planning criteria AEP files with its FERC Form 715.

AEP's transmission owner identified needs must be addressed to achieve AEP's obligations and responsibilities. Meeting these obligations requires that AEP ensures the transmission system can deliver electricity to all points of consumption in the quantity and quality expected by customers, while reducing the magnitude and duration of disruptive events. Given these considerations, criteria and guidelines are necessary to identify and quantify needs associated with transmission facilities comprising AEP's system. AEP identifies the needs and the solutions necessary to address those needs on a continuous basis using an in-depth understanding of the condition of its assets, and their associated operational performance and risk, while exercising engineering judgment coupled with Good Utility Practices [1].

Whereas the End-Of-Life needs, as defined in the FERC-approved Attachment M-3 to the PJM Tariff, are limited to transmission facilities rated above 100 kV, these criteria and guidelines apply to all transmission voltages that comprise the AEP transmission system, including those defined as End-Of-Life needs in the FERC-approved Attachment M-3 to the PJM Tariff. In addition, projections of candidate End-Of-Life needs that result from the process outlined in these AEP criteria and guidelines will be provided to PJM in accordance with the provisions in the FERC-approved Attachment M-3 to the PJM Tariff. Current End-Of-Life and other asset management needs will be vetted with stakeholders in accordance with the provisions in the FERC-approved Attachment M-3 to the PJM Tariff.

Addressing these owner identified transmission system asset management needs, as they pertain to condition, performance and risk, will result in the following benefits to customers:

- Safe operation of the electric grid.
- Reduction in frequency of outage interruptions.
- Reduction in duration of outage interruptions.
- Improvement in service reliability and adequacy to customers.
- Reduction of risk of service disruptions (improved resilience) associated with man-made and environmental threats.
- Proactive correction of reliability constraints that stem from asset failures.
- Effective utilization of resources to provide efficient and cost-effective service to customers.

2.0 Process Overview

AEP's transmission owner needs identification criteria and guidelines are used for projects that address equipment material conditions, performance, and risk. AEP uses the three-step process shown in Figure 1 and discussed in detail in this document to determine the best solutions to address the transmission owner identified needs and meet AEP's obligations and responsibilities. This process is completed on an annual basis. In developing the most efficient and cost-effective solutions, AEP's long-term strategy is to pursue holistic transmission solutions in order to reduce the overall AEP transmission system needs.

Figure 1 – AEP Process for Identifying and Addressing Transmission Asset Condition, Performance and Risk Needs

3.0 Step 1: Needs Identification

Needs Identification is the first step in the process of determining system and asset improvements that help meet AEP's obligations and responsibilities. AEP gathers information from many internal and external sources to identify assets with needs. A collective evaluation of these inputs is conducted and considered, and thus, individual thresholds do not apply. In addition, factors can change over time. A sampling of the inputs and data sources is listed below in Table 1.

Table 1 – Inputs Considered by AEP to Identify Transmission System Needs

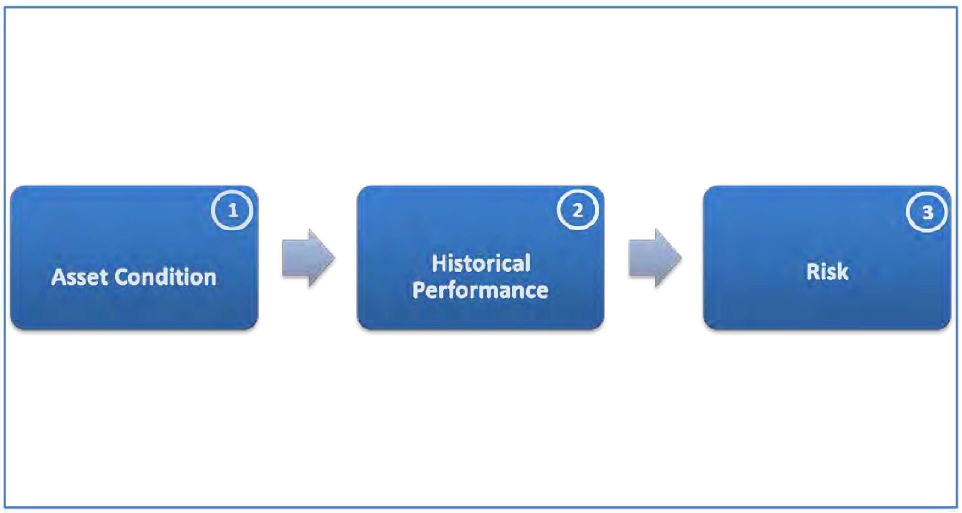
Internal, External, or Both	Inputs	Examples
Internal	Reports on asset conditions	Transmission line and station equipment deterioration identified during routine inspections (pole rot, steel rusting or cracking)
	Capabilities and abnormal conditions	Relay misoperations; Voltage unbalance
	Legacy system configurations	Ground switch protection schemes for transformers;; Transmission Line Taps without switches (hard taps); Equipment without vendor support
	Outage duration and frequency	Outages resulting from equipment failures, misoperations, or inadequate lightning protection
	Operations and maintenance costs	Costs to operate and maintain equipment
External	Regional Transmission Operator (RTO) or Independent System Operator (ISO) issued notices	Post Contingency Local Load Relief Warnings (PCLLRWs) issued by the RTO that can lead to customer load impacts
	Stakeholder input	Input received through stakeholder meetings, such as PJM's Sub Regional RTEP Committee (SRRTEP) meetings or through the AEP hosted Annual Stakeholder Summits
	Customer feedback	Voltage sag issues to customer delivery points due to poor sectionalizing; frequent outages to facilities directly affecting customers
	State and Federal policies, standards, or guidelines	NERC standards for dynamic disturbance recording
Both	Environmental and community impacts	Equipment oil/gas leaks; facilities currently installed at or near national parks, national forests, or metropolitan areas
	Standards and Guidelines	Minimum Design Standards, Radial Lines, Three Terminal Lines, Overlapping Zones of Protection
	Safety risks and concerns	Station and Line equipment that does not meet ground clearances; Facilities identified as being in flood zones; New Occupational Safety and Hazards Administration (OSHA) regulations

These inputs are reviewed and analyzed to identify the transmission assets that are exhibiting unacceptable condition, performance and risk, and thus, must be addressed through the FERC-approved Attachment M-3 planning process.

3.1 Methodology and Process Overview

The AEP transmission system is composed of a very large number of assets that provide specific functionality and must work in conjunction with each other in the operation of the grid. These assets have been deployed over a long period of time using engineering principles, design standards, safety codes, and Good Utility Practices that were applicable at the time of installation and have been exposed to varying operating conditions over their life. The Needs Identification methodology is shown below in Figure 2. AEP addresses the identified needs considering factors including severity of the asset condition and overall system impacts. These are subsequently evaluated versus constraints such as outage availability, siting requirements, availability of labor and material, constructability, and available capital funding in determining the timing and scope of mitigation.

Figure 2 – Needs Identification Methodology



It is AEP's strategy and goal to develop and provide the more efficient, cost-effective, safe, reliable, resilient, and holistic long-term solutions for the identified needs.

3.2 Asset Condition (Factor 1)

The Asset Condition assessment gathers a standard set of physical characteristics associated with an asset or a group of assets. The set of data points recorded is determined based on the asset type and class. Information assembled during the Asset Condition assessment is used to show the historical deterioration, current condition, and future expectation of the asset or group of assets on the AEP system.

AEP annually assembles a list of reported condition issues for all of its assets in its system. A detailed follow-up review is conducted to determine if a transmission asset is in need of upgrade and/or replacement. Additionally, this Asset Condition review is used to determine an adequate scope of work required to mitigate the risk associated with a facility's performance and its identified issues. This level of risk is determined through the Future Risk assessment (Factor 3).

Beyond physical condition, AEP's ability to restore the asset in case of a failure is also considered. This is referred to as the future probability of failure adder. Typically, assets that are no longer supported by manufacturers or lack available spare parts are assigned a higher probability of failure adder.

To perform condition assessments, AEP classifies its Transmission assets in two main categories: Transmission Lines and Substations.

3.2.1 Transmission Line Considerations

Design Portion

A. Age (Original Installation Date)
B. Structure Type (Wood, Steel, Lattice)
C. Conductor Type (Size, Material & Stranding)
D. Static Wire Type (Size & Material)
E. Foundation Type (Grillage, Direct Embed, Caisson, Guyed V, Drilled Pier etc.)
F. Insulator Type (Material)
G. Shielding and Grounding Design Criteria (Ground Rod, Counterpoise, "Butt Wrap" etc.)
H. Electrical Configuration
    a. Three Terminal Lines
    b. Radial Facilities
I. NESC Standards Compliance
    a. Structural Strength (NESC 250B, 250C & 250D Compliance)
    b. Clearances (TLES-047 Compliance)

J. Easement Adequacy (Width, Encroachments, Type; etc.)

Physical Condition

A. Open Conditions (existing and unaddressed physical conditions associated with a Transmission Line component)
B. Closed Conditions (previously addressed physical conditions associated with a Transmission Line component)
C. Emergency Fixes (History of emergency fixes)
D. Accessibility (Identified areas of difficult access)

3.2.2 Substation Considerations

A. Transformers
   a. Manufacturer
   b. Manufacturing Date
   c. In Service Date
   d. Load Tap Changer Type & Operation History (if applicable)
   e. Dissolved Gas Analysis
   f. Bushing Power Factor
   g. Through Fault Events (Duval Triangles)
   h. Moisture Content (Oil)
   i. Oil Interfacial Tension
   j. Dielectric Strength
   k. Maintenance History
   l. Malfunction Records
B. Circuit Breakers
   a. Manufacturer & Type
   b. Manufacturing Date
   c. In Service Date
   d. Interrupting Medium
   e. Fault Operations
   f. Switched Operations

g. Spare Part Availability
h. Maintenance History
i. Malfunction Records
j. Breaker Type Population

C. Secondary/Auxiliary Substation Equipment*

a. Station Batteries
b. Control House
c. Station Security
d. Station Structures
e. Capacitor Banks
f. Bus, Cable and Insulators
g. Disconnect Switches
h. Station Configuration
i. Station Service
j. Relay Types
k. RTU Types
l. Voltage Sensing Devices

**AEP substation inspections include assessments of secondary/ancillary equipment. If needed, upgrades to these components are typically included in the scope of projects addressing major equipment and may not necessarily drive stand-alone projects.*

3.3 Historical Performance (Factor 2)

AEP's Historical Performance assessment quantifies how an asset or a group of assets has historically impacted the Transmission system's reliability and Transmission connected customers, helps identify the primary contributing factors to a facility's performance, and baselines the outage probability used in our Future Risk analysis. The metrics used as part of this historical performance assessment include:

A. Forced Outage Rates
B. Manual Outage Rates
C. Outage Durations (Forced Outage Duration in Hours)
D. System Average Interruption Indices (T-SAIDI, T-SAIFI, T-SAIFI-S, T-MAIFI)

E. Customer Minutes of Interruption (CMI)

F. Customer Average Interruption Indices (IEEE SAIDI, CAIDI & SAIFI)

G. Number of Customers Interrupted (CI)

AEP utilizes this standard set of metrics as a means to quantify the historical performance of an asset. These historical performance metrics allow AEP to further investigate assets that have historically impacted customers the most.

Due to the vast size of the AEP operating territory covering 11 states, AEP segments its needs into seven distinct operating company regions and six voltage classes. This segmentation ensures that variations in geography with respect to vegetation, weather patterns, and terrain can be accounted for within the process of identifying needs for each operating company area. In addition to customers of AEP operating companies, consideration for retail customers that are served at non-AEP wholesale customer service points is also included. In order to account for customers served behind wholesale meter points, AEP gathers information from the parent wholesale provider or in its absence, applies a surrogate customers per MW ratio to estimate the number of customers served by a wholesale power provider's delivery point. This customer count is used to calculate the individual metrics above.

AEP's standard approach is to annually review the historical performance of its assets based on a rolling three-year average, but in some cases AEP may extend the review period beyond three years. AEP classifies all transmission asset outage causes into the following five categories to conduct this review: Transmission Line Component Failure, Substation Component Failure, Vegetation (AEP), Vegetation (Non-AEP), and External Factors. Each transmission asset and its associated performance is quantified and compared against corresponding system totals to determine its percentage contribution to aggregated system performance. An evaluation of outage rates is also performed for Transmission line assets. The observed performance of the assets in any of these categories can point to a need that may need to be addressed.

3.4 Future Risk (Factor 3)

AEP reviews the associated risk exposure (future risk) inherent with each identified asset to determine an asset's level of risk. This risk exposure is quantified assuming the probability of an outage scenario and is based on the reported condition of the asset and the severity of that condition and what the impact could be to customers or to the operation of AEP's Transmission system. Some of the key items to assess these impacts included in the risk criteria are:

A. Number of Customers Served
B. Load Served
C. Operational Risks
    a. Post Contingency Load Loss Relief Warnings (PCLLRW's)
    b. History of Load Shed Events
    c. Stations in Black Start Paths

In addition to the future risk calculation performed through this process, AEP is systematically reviewing its system to identify and remediate equipment and practices that have resulted in operational, restoration, environmental, or safety issues in the past that cannot be directly quantified, but that remain as acknowledged risks in the AEP Transmission system. These include:

A. Wood pole construction
B. Pilot wire protection schemes
C. Oil circuit breakers
D. Air Blast circuit breakers
E. Pipe type oil filled cables
F. Electromechanical relays
G. Legacy system configurations
    a. Missing or inadequate line switches (e.g., hard-taps)
    b. Missing or inadequate transformer/bus protection
    c. Three-terminal lines
    d. Overlapping zones of protection
H. Non-Standard Voltage Classes
I. Poor Lightning & Grounding Performance
J. Radial Facilities
K. Public vulnerability

These items as described above are reviewed on a case by case basis and considered when holistic system solutions are being developed.

4.0 Step 2: Solution Development

The development of solutions for the identified needs considers a holistic view of all of the needs in which several solution options are developed and scoped. AEP applies the appropriate industry standards, engineering judgment, and Good Utility Practices to develop these solution options. AEP solicits customer and external stakeholder input on potential solutions through the Annual Stakeholder Summits hosted by AEP and also through the PJM Project Submission process. This ensures that input from external stakeholders on identified needs can be received and considered as part of the solution development process.

Solution options consider many factors including, but not limited to, environmental conditions, community impacts, land availability, permitting requirements, customer needs, system needs, and asset conditions in ultimately identifying the best solution to address the identified need. Once the selected solution for a need or group of needs is defined, it is reviewed using the current RTO provided power-flow, short circuit, and stability system models (as needed) to ensure that the proposed solution does not adversely impact or create baseline planning criteria violations on the transmission grid. Finally, AEP reviews its existing portfolio of baseline planning criteria driven reliability projects and evaluates opportunities to combine or complement existing baseline planning criteria driven reliability projects with the transmission owner needs driven solutions developed through this process. This step ultimately results in the implementation of the more efficient, cost-effective, and holistic long-term solutions. Stand-alone projects are created to implement the proposed solution where transmission owner needs driven solutions cannot be integrated into existing projects.

5.0 Step 3: Solution Scheduling

Once solutions are developed to address the identified needs, the scheduling of the solutions will take place. As mentioned in the previous section, if opportunities exist to combine or complement existing baseline planning criteria driven reliability projects with the needs driven solutions developed through this process, the scheduling will be aligned to the extent possible. In all other situations, AEP will schedule the implementation of the identified solutions in consideration of various factors including severity of the asset condition, overall system impacts, outage availability, siting requirements, availability of labor and material, constructability, and available capital funding. AEP uses its discretion and engineering judgment to determine suitable timelines for project execution.

6.0 Conclusion

This document outlines AEP's criteria and guidelines for transmission owner identified needs that address equipment material conditions, performance, and risk. It outlines the sources and methods considered by AEP to identify assets with needs on a continuous basis and it outlines how solutions are developed and scheduled. AEP will review and modify these criteria and guidelines as appropriate based upon our continuing experience with the methodology, acquisition of data sources, deployment of improved performance statistics and the receipt of stakeholder input in order to provide a safe, adequate, reliable, flexible, efficient, cost-effective and resilient transmission system that meets the evolving needs of all of the customers it serves.

7.0 References

[1] FERC Pro Forma Open Access Transmission Tariff, Section 1.14, Definition of "Good Utility Practice".
Link: https://www.ferc.gov/legal/maj-ord-reg/land-docs/rm95-8-0aa.txt

[2] AEP Transmission Planning Documents and Transmission Guidelines.
Link: http://www.aep.com/about/codeofconduct/OASIS/TransmissionStudies/

AEP Transmission Zone M-3 Process
Beaver Creek – Elwood 46kV

Need Number: AEP-2020-AP009

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 04/08/2021

Previously Presented:
Needs Meeting 02/21/2020
Solutions Meeting 11/20/2020

Project Driver:
Equipment Condition/Performance/Risk, Operational Flexibility

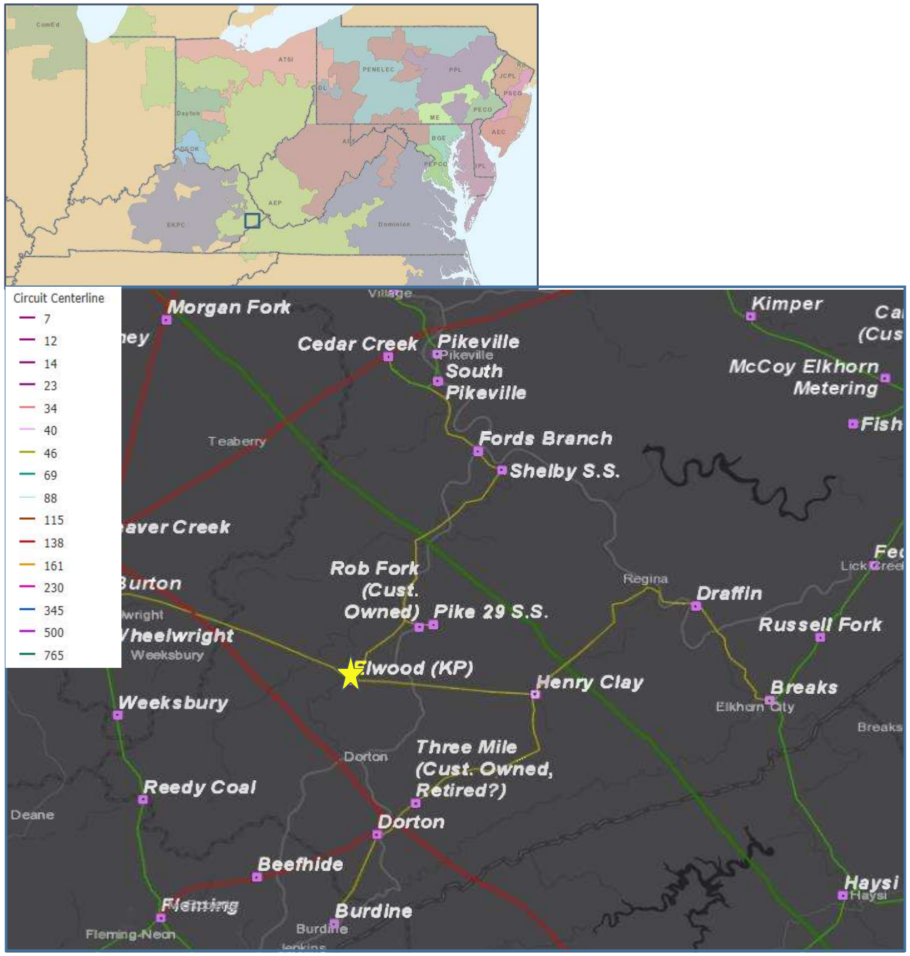
Specific Assumption Reference:
AEP Guidelines for Transmission Owner Identified Needs (AEP Assumptions Slide 8)

Problem Statement:

Elwood 46kV Station:

46 kV Circuit Breakers A,B, and C

- 1960's vintage FZO-69-1500P type oil circuit breakers.
- Fault Ops: CB A (33), CB B (83), and CB C (105). Recommended : 10
- Other drivers: damage to bushings, spare part availability, historical reliability, and lack of vendor support of the breakers.
- There are 8 remaining FZO-69-1500P circuit breakers on the AEP system, including the 3 at this station.
- 86% of the relays (36/42) at the station are electromechanical, which have significant limitations with regards to fault data collection and retention and have no spare part availability due to a lack vendor support.



AMERICAN ELECTRIC POWER
BOUNDLESS ENERGY

AEP Transmission Zone M-3 Process
Beaver Creek – Elwood 46kV

Need Number: AEP–2020-AP011

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 04/08/2021

Previously Presented:

Needs Meeting 02/21/2020

Solutions Meeting 11/20/2020

Project Driver:

Equipment Material/ Condition/Performance/Risk, Operational Flexibility and Efficiency

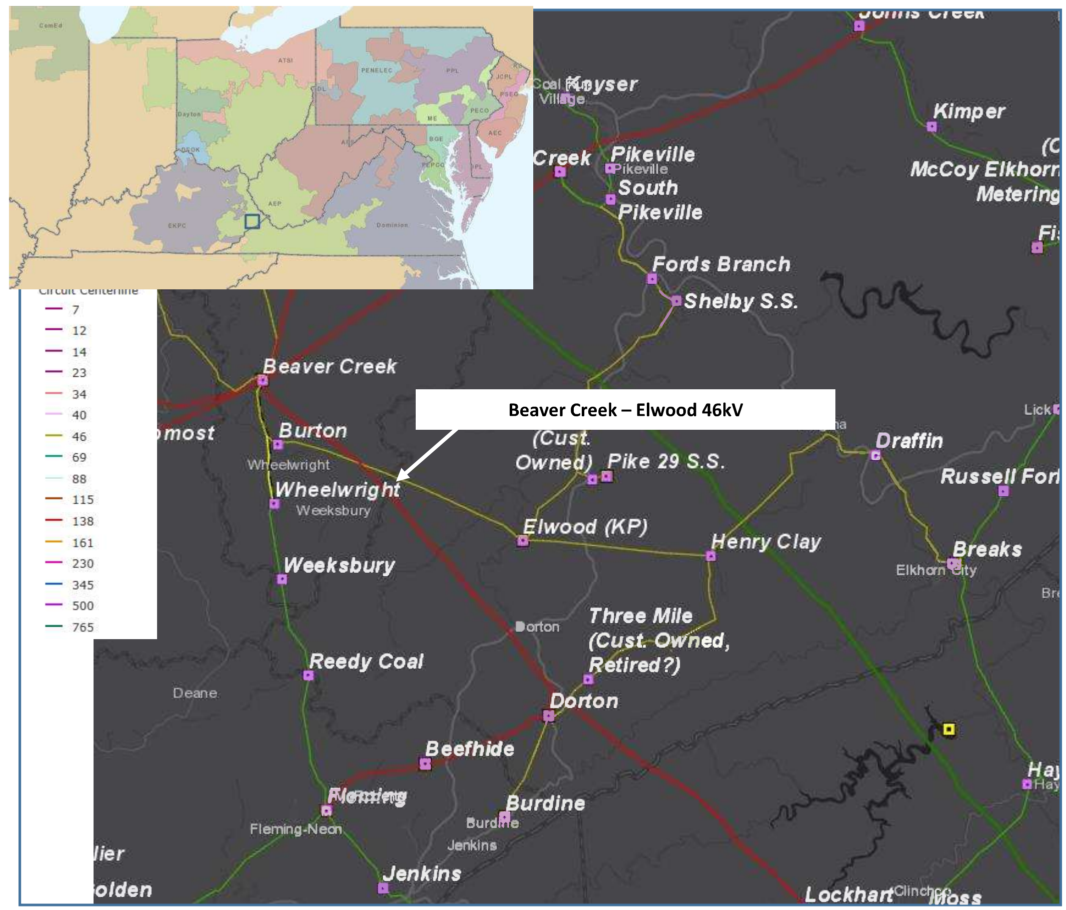
Specific Assumption Reference:

AEP Guidelines for Transmission Owner Identified Needs (AEP Assumptions Slide 8)

Problem Statement:

Beaver Creek – Elwood 46kV:

- Original Install Date: 1930s vintage
- Length of Line: ~10.48 mi
- Total structure count: 60
- Original Line Construction Type: Wood
- Conductor Type: 336 ACSR
- Momentary/Permanent Outages and Duration: 18 Momentary and 1 permanent Outage
- CMI (last 5 years only): 269,070 minutes
- Number of open conditions: 34 open conditions on 20 unique structures.
- Open conditions include crossarms and poles with rot top, woodpecker damage and leaning-in-line conditions.



AMERICAN ELECTRIC POWER
BOUNDLESS ENERGY

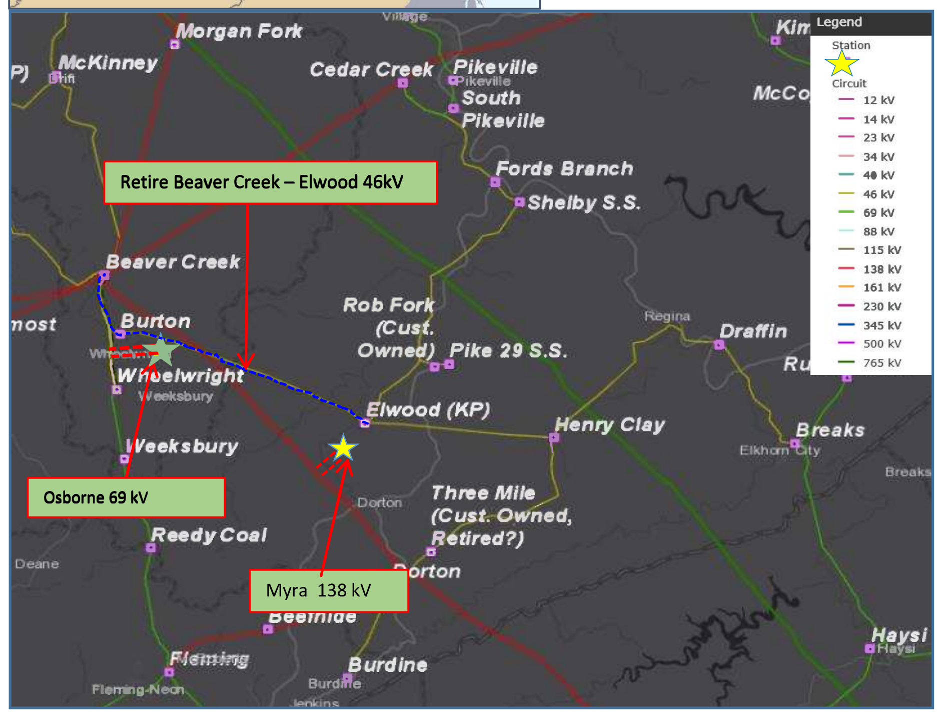
AEP Transmission Zone M-3 Process
Beaver Creek – Elwood 46kV

Need Number: AEP-2020-AP009, AEP–2020-AP011

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 04/08/2021

Selected Solution:

- Construct a greenfield 69/12 KV Osborne Station to replace Burton Station, including a high-side 69KV Phase Over Phase switch, fiber connectivity, a circuit switcher, and one 69/12kV 12/16/20MVA transformer and associated distribution feeders. **Estimated Transmission Cost: $0.74M (s2436.1)**
  - Note: Cost does not include the Distribution scope of work.
- Construct a greenfield 138KV Myra Station to replace Elwood Station. Install 138KV double box bay with two 138kV circuit breakers and line exits to Fremont & Beaver Creek. Install 138/34.5 kV transformer with high-side circuit switcher and associated 34.5kV breakers. Install fiber connectivity for upgraded relaying. **Estimated Transmission Cost: $3.43 M (s2436.2)**
  - Note: Cost does not include the Distribution scope of work.
- Remote end relaying work at Beaver Creek substation. Remove 46KV Elwood Line 46kV circuit breaker "G" and associated equipment. **Estimated Transmission Cost: $0.17 M (s2436.3)**
- Remote end relaying work at Fremont substation. **Estimated Transmission Cost: $0.42 M (s2436.4)**
- At Burton station, retire and remove all existing equipment. **Estimated Transmission Cost: $0M (s2436.5)**
- At Elwood station, retire and remove all existing equipment. **Estimated Transmission Cost: $0 M (s2436.6)**
- Construct a new ~0.5 mi double circuit 69 kV line to the proposed Osborne substation. **Estimated Cost: $2.56 M (s2436.7)**
- Reconfigure the existing Beaver Creek - Fleming 69kV line to facilitate the construction of the new double circuit Osborne 69kV line to feed the proposed Osborne Substation. **Estimated Cost: $1.22 M (s2436.8)**



AMERICAN ELECTRIC POWER
BOUNDLESS ENERGY

AEP Transmission Zone M-3 Process
Beaver Creek – Elwood 46kV

Proposed Solution (Cont.):

- Construct a new ~2 mi double circuit 138 kV line to the proposed Myra substation. **Estimated Cost: $8.8 M (s2436.9)**
- Reconfigure the existing Beaver Creek - Fremont 138kV circuit to facilitate the construction of the new double circuit Myra Extension 138kV Line to feed the proposed Myra Substation. **Estimated Cost: $1 M (s2436.10)**
- Install two replacement structures in order to bypass Elwood station. Transfer wires from old structure to new structure. Tie new structure to Cedar Creek-Henry Clay 46kV Line. **Estimated Cost: $1.35 M (s2436.11)**
- Retire ~10.48 mi Beaver Creek – Elwood 46kV line. **Estimated Cost: $6.47 M (s2436.12)**

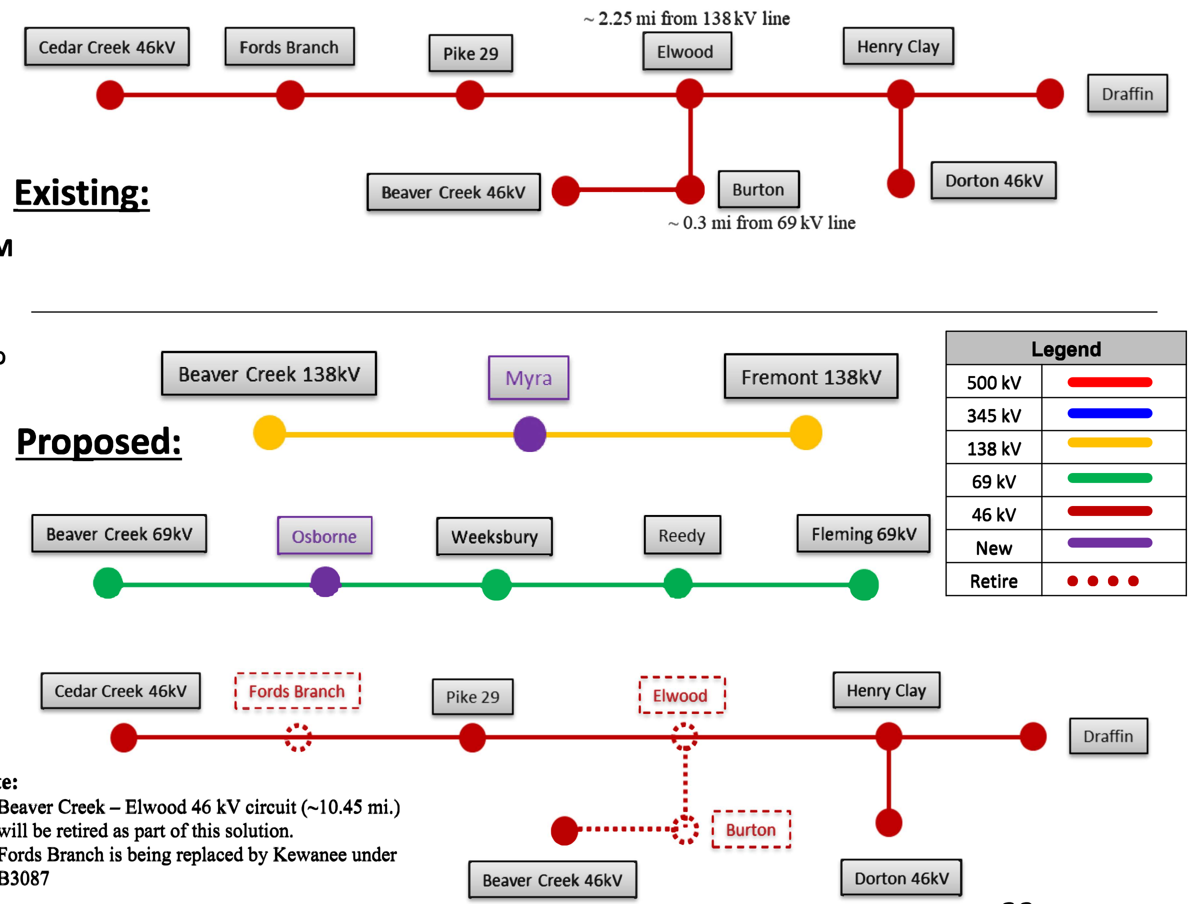
Total Estimated Transmission Cost: $26.16 M

Projected In-Service: 11/31/2024

Supplemental Project ID: s2436.1-.12

Project Status: Scoping

Model: N/A



Note:
- Beaver Creek – Elwood 46 kV circuit (~10.45 mi.) will be retired as part of this solution.
- Fords Branch is being replaced by Kewanee under B3087

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

Electronic Application Of Kentucky Power Company	)	
For (1) A General Adjustment Of Its Rates For	)	
Electric Service; (2) Approval Of Tariffs And Riders;	)	
(3) Approval Of Accounting Practices To Establish	)	Case No. 2023-00159
Regulatory Assets And Liabilities; (4) A	)	
Securitization Financing Order; And (5) All Other	)	
Required Approvals And Relief	)	

DIRECT TESTIMONY OF

JOSHUA D. BURKHOLDER

ON BEHALF OF KENTUCKY POWER COMPANY

DIRECT TESTIMONY OF
JOSHUA D. BURKHOLDER
KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

CASE NO. 2023-00159

TABLE OF CONTENTS

SECTION **PAGE**

**DIRECT TESTIMONY OF
JOSHUA D. BURKHOLDER ON BEHALF OF
KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY**

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Joshua D. Burkholder, and my business address is 1 Riverside Plaza, Columbus, Ohio 43215.

II. BACKGROUND

Q. BY WHOM ARE YOU EMPLOYED AND WHAT IS YOUR POSITION?

A. I am employed by American Electric Power Service Corporation ("AEPSC") as Managing Director – Transmission RTO Policy. AEPSC supplies engineering, financing, accounting, planning, advisory, and other services to the subsidiaries of the American Electric Power ("AEP") system, one of which is Kentucky Power Company ("Kentucky Power" or the "Company").

Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A. I earned a bachelor's degree with honors in economics in 1997 from the University of Maryland in College Park, MD. I graduated from The Ohio State University, Fisher College of Business with a Masters of Business Administration in 2002.

From 1997 to 2000, I held the position of Economist at the U.S Department of Commerce, Bureau of Economic Analysis, where I participated in analysis of international financial data.

I joined AEPSC in 2002 as an associate in commercial operations and worked on various business development projects and AEP's integration into PJM Interconnection, LLC ("PJM"). In 2004, I joined AEPSC's Corporate Planning and Budgeting organization as Staff Financial Analyst of Strategic Initiatives and was promoted to Manager of Strategic Initiatives in 2007. In this role, I was responsible for working with AEPSC leadership in developing AEP's strategic plan and other strategic studies and analysis. In 2009, I transferred to AEP's transmission business unit as Manager, Transmission Strategy and Business Development where I was responsible for coordinating activities associated with the operations of the AEP transmission companies and for budgeting and financial analysis for the AEP transmission organization. In 2012, I was promoted to Director of Competitive Transmission Development for AEP's affiliate company Transource Energy, LLC. There, I was responsible for securing competitive transmission projects within the PJM and MISO regions. In 2018, I was named Director, FERC and RTO Strategy and Policy, responsible for federal and regional policy matters impacting AEP's transmission and generation businesses. In March 2023, I was promoted within the same group to my current position.

Q. WHAT ARE YOUR RESPONSIBILITIES AS MANAGING DIRECTOR - TRANSMISSION RTO POLICY?

A. I lead a team that is responsible for the development and advocacy of AEP's and its subsidiaries' strategies and positions in their respective Regional Transmission Organization ("RTO"), including PJM, regarding policy matters impacting the transmission and generation functions. This includes working closely with AEP operating companies and other AEP leadership to determine the impacts of and develop positions regarding potential policy changes. My team is deeply engaged in the stakeholder process ranging from technical working groups to the most senior standing committees.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE ANY REGULATORY COMMISSIONS?

A. Yes. I have testified before the Arkansas Public Service Commission and the Indiana Utilities Regulatory Commission.

III. PURPOSE OF DIRECT TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. The purpose of my testimony is to provide evidence regarding the steps the Company has taken to address concerns regarding transmission costs discussed in the Commission's January 13, 2021 Order in Case No. 2020-00174 (the "2020 Rate Case Order"). My testimony also provides a factual background regarding Kentucky Power's membership in the PJM regional transmission organization and participation in the AEP Transmission Agreement, and the benefits to Kentucky Power's customers of that participation. Finally, my testimony provides: (a) a high-level overview of the methodology used to determine Kentucky Power's Open Access Transmission Tariff ("OATT") expenses, and (b) the relationship between and independence of the transmission revenues associated with Kentucky Power's investment on transmission projects in its service territory and the transmission expenses it incurs for its use of the transmission network in PJM and the AEP Zone. Company Witness Ali will provide evidence concerning the practical benefits, needs, and required investments associated with Kentucky Power's obligation to serve its retail customers. Therefore, my testimony focuses on policy considerations, and on some of the risks associated with possible changes to the methodology used to determine Kentucky Power's transmission expenses under transmission rates regulated by the Federal Energy Regulatory Commission ("FERC").

IV. KENTUCKY POWER'S MEMBERSHIP IN PJM AND THE BENEFITS TO CUSTOMERS FROM THAT PARTICIPATION

Q. PLEASE DESCRIBE THE RELATIONSHIP BETWEEN KENTUCKY POWER AND PJM.

A. Kentucky Power is a member of PJM. Kentucky Power joined PJM in 2004, pursuant to authorization granted by the Commission on its Order dated May 19, 2004, in Case No. 2002-00475.[1] Within PJM, Kentucky Power is located in PJM's AEP Zone, as shown in Attachment J to the PJM OATT, consistent with the provisions of the FERC-

[1] Order, Case No. 2002-00475, *In the Matter of: Application of Kentucky Power Company d/b/a American Electric Power for Approval, to the Extent Necessary, to Transfer Functional Control of Transmission Facilities Located in Kentucky to PJM Interconnection, L.L.C. Pursuant to KRS 278.218* (Order dated May 19, 2004).

regulated Consolidated Transmission Owners Agreement ("CTOA").[2] Kentucky Power has three roles in PJM; it is: (a) a load serving entity ("LSE", also referred to as a "wholesale transmission customer"), (b) a transmission owner ("TO" or "Transmission Owner"), and (c) a generator.

Q. PLEASE DESCRIBE PJM's ROLE AS THE TRANSMISSION PROVIDER OF WHOLESALE TRANSMISSION SERVICE.

A. To understand the dynamics of wholesale transmission service, an important first point is that PJM is the Transmission Provider of transmission service to LSEs and uses the transmission facilities of TOs to provide this service. PJM, as the Transmission Provider, charges LSEs for their use of the PJM transmission system based on FERC-regulated rates and, for the LSEs, this is an expense that I will define as "Transmission OATT Expense." In turn, PJM uses the transmission facilities owned by TOs in proving wholesale transmission service and compensates TOs for this. For the TO, this is revenue that I will define as "Transmission OATT Revenue." I go into further detail about how both Transmission OATT Expense and Transmission OATT Revenues are determined for Kentucky Power and the role of FERC in these processes later in my testimony.

[2] Attachment J to the PJM OATT is available at https://pjm.com/directory/merged-tariffs/oatt.pdf. The CTOA, also known as FERC Schedule 42, is available at https://www.pjm.com/directory/merged-tariffs/toa42.pdf.

Q. PLEASE GENERALLY EXPLAIN HOW KENTUCKY POWER PARTICIPATES IN PJM AS AN LSE REGARDING TRANSMISSION SERVICE.

Kentucky Power is as an LSE in PJM and, as such, Kentucky Power is charged Transmission OATT Expense by PJM. I will refer to the specific amount that is charged to Kentucky Power as the "Kentucky Power OATT Expense."[3] In simplified terms, the Kentucky Power OATT Expense is what Kentucky Power pays to PJM, the Transmission Provider, for Kentucky Power's use of the PJM transmission system under FERC-regulated rates.

Q. PLEASE GENERALLY EXPLAIN HOW KENTUCKY POWER PARTICIPATES IN PJM AS A TRANSMISSION OWNER.

Kentucky Power also is a Transmission Owner in PJM and receives Transmission OATT Revenue from PJM, and I will refer to the specific amount that is received by Kentucky Power as the "Kentucky Power OATT Revenue." In simplified terms, the Kentucky Power OATT Revenue is what Kentucky Power receives from PJM for PJM's use of Kentucky Power's transmission facilities in providing wholesale transmission service under FERC-regulated rates.

Q. PLEASE GENERALLY EXPLAIN HOW KENTUCKY POWER PARTICIPATES IN PJM AS A GENERATOR.

A. Kentucky Power's generation assets are operated consistent with dispatch rules administered by PJM. Kentucky Power offers 100% of its generation energy production

[3] This is also commonly referred to as Kentucky Power's PJM LSE OATT costs, charges, or expense.

in PJM's energy markets. Kentucky Power purchases 100% of its energy needs from the PJM energy markets. Kentucky Power's customers are served using energy and capacity obtained by Kentucky Power pursuant to PJM's OATT and subject to FERC's regulation over wholesale energy markets.[4]

Q. DOES YOUR TESTIMONY FOCUS ON ONE OR MORE OF THOSE THREE ROLES?

A. Yes. While generation is also important, my testimony is focused on Kentucky Power's roles in PJM regarding wholesale transmission service as a TO and an LSE.

Q. WHAT FACTORS CONTRIBUTE TO KENTUCKY POWER'S USE OF THE PJM TRANSMISSION SYSTEM?

A. The primary factor is that only a portion of the generation facilities that provide Kentucky Power with the capacity and energy needed to serve retail customers are in the state of Kentucky and, therefore, Kentucky Power uses the PJM transmission system to have access to needed resources located outside of the state. It is my understanding that Kentucky Power's generation fleet has changed significantly over the past two decades, including the retirement of the Big Sandy II coal-fired plant, the conversion of Big Sandy I to a gas-fueled generating unit, and the acquisition of Kentucky Power's interest in the Mitchell Plant in West Virginia.

[4] As a load serving entity in PJM, Kentucky Power is required to meet its capacity obligations through one of the two alternatives currently available under the PJM OATT, namely the Fixed Resource Requirement ("FRR") option, or from the Reliability Pricing Model ("RPM") option. Kentucky Power has elected the FRR option through PJM's 2024/25 planning year.

Q. DO KENTUCKY POWER AND ITS CUSTOMERS BENEFIT FROM KENTUCKY POWER'S USE OF THE PJM TRANSMISSION SYSTEM AS A TO AND LSE?

A. Absolutely. This use of the PJM transmission service avails Kentucky Power of the benefits of participation in all aspects of PJM. This includes the benefits resulting from having access to the whole transmission system over which PJM has functional control, and to all the markets administered by PJM, including energy and capacity markets. Kentucky Power would receive this transmission service regardless of whether it itself owns transmission facilities, as illustrated by the fact that it is possible to be an LSE and own, maintain, and operate only the very few transmission facilities, if any, just necessary to interconnect to the PJM transmission network.

Q. DOES KENTUCKY POWER USE THE TRANSMISSION SYSTEM OUTSIDE OF KENTUCKY TO SERVE ITS CUSTOMERS?

A. To have access to the energy and generation capacity Kentucky Power requires to serve its customers, Kentucky Power depends on transmission facilities it does not own, located in PJM both within and outside the AEP Zone. Company Witness Ali provides details of how Kentucky Power uses transmission facilities that it does not own. Without access to use these transmission facilities, Kentucky Power would be limited to either rely on generation resources in its own service territory or on energy and capacity contracts that undoubtedly would embed a cost for using and having access to the infrastructure necessary to transmit power from where it is generated to the load centers in Kentucky Power's territory. Access to these facilities is necessary for Kentucky Power's customers to benefit from the economic efficiency, flexibility, resilience, and depth that are the hallmark of an electric regional transmission organization. In fact, even under a hypothetical scenario where Kentucky Power was not a member of PJM, it would still incur costs for its use of transmission facilities it does not own (either in wholesale transmission rates or in other rates in which those costs are embedded), in addition to incurring the costs associated with constructing, maintaining, and operating its own transmission facilities.

Q. DOES KENTUCKY POWER'S USE OF THE TRANSMISSION SYSTEM OUTSIDE OF KENTUCKY PROVIDE ADDITIONAL ASSURANCES THAT CUSTOMERS WILL HAVE ACCESS TO CAPACITY NEEDED TO SERVE CUSTOMERS?

A. Yes. Specifically concerning its access to capacity resources, Kentucky Power's access to the PJM transmission system, and particularly to the transmission facilities in the AEP Zone, provide Kentucky Power with ample flexibility to elect to continue to satisfy its capacity requirements under PJM's FRR alternative, or elect in the future, depending on market conditions and an evaluation of relative risks, to instead participate in the RPM capacity market. Such flexibility would simply not exist if Kentucky Power had no access to the transmission facilities in the AEP Zone and beyond in PJM.

Q. HOW DO KENTUCKY POWER'S OATT EXPENSES CURRENTLY COMPARE TO KENTUCKY POWER'S OATT REVENUES?

A. Kentucky Power's OATT expenses have been higher than its revenues. However, transmission expenses and revenues should not be expected to be exactly commensurate. Kentucky Power's transmission revenues can reasonably be expected to be less than its transmission expenses at different points in time, and under various circumstances. The main conclusion that I draw from the current relationship of OATT revenue and expense is that at the wholesale level, Kentucky Power uses the PJM transmission system to a greater degree than other wholesale transmission customers use Kentucky Power's transmission facilities.

Q. WHAT WAS THE TEST YEAR KENTUCKY POWER OATT REVENUE?

A. During the test year, the FERC-approved formula rate for Kentucky Power resulted in OATT revenue of $86,296,748 on a total company basis as shown in Section V, Schedule 4.

Q. WHAT WAS THE TEST YEAR KENTUCKY POWER OATT EXPENSE?

A. As supported by Company Witness Walsh, total adjusted test year Kentucky Power OATT Expense (which Ms. Walsh refers to as LSE OATT expense) was $136,358,812.

Q. ARE THE TRANSMISSION OATT EXPENSES INCURRED BY KENTUCKY POWER DETERMINED USING RATES AND TARIFFS THAT FERC HAS FOUND ARE JUST AND REASONABLE?

A. Yes. The annualized adjusted amounts that Kentucky Power pays for the wholesale transmission service it receives as a member of PJM, as supported by Company Witness Walsh, are determined and billed pursuant to tariffs and formula rates that FERC has found result in just and reasonable rates.

V. STEPS TAKEN BY KENTUCKY POWER TO ADDRESS CONCERNS ABOUT ITS TRANSMISSION COSTS

Q. HAS THE COMMISSION EXPRESSED CONCERNS ABOUT THE SHARE OF TRANSMISSION CHARGES BORNE BY KENTUCKY POWER'S CUSTOMERS?

A. Yes. Notwithstanding FERC's determination that the amounts that Kentucky Power pays for the PJM transmission service are just and reasonable, the Commission has expressed concerns, such as in the 2020 Rate Case Order, about rising transmission costs paid by Kentucky Power customers and the fact that its wholesale transmission expenses exceed its transmission revenues.

Q. WHAT CONCERNS REGARDING TRANSMISSION INVESTMENT AND EXPENSE DID THE COMMISSION IDENTIFY IN THE 2020 RATE CASE ORDER?

A. In its 2020 Rate Case Order, the Commission identified "concern[s] regarding Kentucky Power's and AEP's activities related to transmission investment, control and ownership in Kentucky Power's territory . . ."[5] The Commission also was "concerned that AEP, not Kentucky Power, [was] exerting the ultimate authority over Kentucky Power's transmission system . . ."[6] It further indicated that it was concerned that Kentucky Power appeared to be "acquiescing to the transfer of actual ownership and control of its transmission system to affiliates for which Kentucky Power has no command and the Commission has no authority," including AEP Kentucky

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[5] 2020 Rate Case Order at 60.

[6] *Id.* at 62.

Transmission Company, Inc. ("Kentucky Transco").[7] Opining that Kentucky Power's "transmission planning and investment activities [were] not sustainable and must be substantively addressed in the near future,"[8] the Commission directed the Company to "address the burden these increasing expenses will represent to its dwindling customer base."[9]

Q. PLEASE EXPLAIN WHAT STEPS THE COMPANY HAS TAKEN TO ADDRESS THE CONCERNS SUMMARIZED ABOVE.

A. Kentucky Power has taken steps to address the Commission's directive in four main areas of focus:

1. Addressing the Commission's concerns about the transfer of ownership and control of its transmission system to affiliates, Kentucky Power no longer involves Kentucky Transco in projects related to Kentucky Power's transmission assets. Additionally, Kentucky Power continues to make appropriate necessary capital investments in its transmission system to address its customers' transmission needs. Company Witness Ali discusses these items further.

2. With respect to the Commission's concerns regarding common AEP ownership of Kentucky Power and affiliate transmission owners in PJM, Kentucky Power sought to obtain approval of a transaction to sell the Company to an entity not affiliated with AEP. In the context of that

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[7] *Id*.

[8] *Id.* at 60.

[9] *Id.* at 63.

transaction, studies would have been pursued consistent with recommendations that have been made in previous Kentucky Power cases before the Commission.

3. To address the impact of transmission costs on customers, Kentucky Power has advanced initiatives to manage and, when possible, reduce the percentage of costs currently allocated to Kentucky Power under the existing FERC-approved PJM OATT and the AEP Transmission Agreement.

4. Finally, to more broadly address transmission cost allocation issues, AEPSC has initiated the process to conduct an analysis of PJM transmission cost allocation and its impacts on Kentucky Power and on the other AEP East Operating Companies, to form recommendations concerning cost allocation, inclusive of the concerns identified by the Commission regarding transmission cost allocation impacts on the Company.

Q. PLEASE DISCUSS THE EFFORTS TO OBTAIN APPROVAL OF THE SALE OF KENTUCKY POWER AS A MEANS TO ADDRESS THE CONCERNS ABOUT THE COMPANY'S TRANSMISSION EXPENSES.

A. Over a period of more than two years, including proceedings before the Commission in Case No. 2021-00481, AEP, Kentucky Power, and Liberty Utilities Co. ("Liberty") sought to obtain approval of the sale of Kentucky Power to Liberty. This transaction would have positioned Kentucky Power to no longer be an affiliate of the AEP System, prompting a transition period including a re-evaluation of Kentucky Power's membership in PJM and relationship with other utilities in PJM and in the AEP Zone. In Case No. 2021-00481, as a condition of the approval of the transaction, and subject to the transaction being completed, Liberty specifically agreed that, "[w]ithin 2 years of the close of the transaction, Kentucky Power will evaluate the benefits and costs of its participation in the PJM, and to the extent appropriate, explore alternatives."[10] Although the Commission approved the transaction in May 2022, the transaction was terminated by mutual agreement in April 2023. Consequently, the study agreed to by Liberty was not pursued.

Q. PLEASE DISCUSS THE COMPANY'S EFFORTS TO REDUCE ITS CONTRIBUTION TO THE AEP ZONE COINCIDENT PEAKS AS A MEANS TO REDUCE KENTUCKY POWER'S OATT EXPENSES.

A. The Company has negotiated, and presented to this Commission for approval, multiple special peak-shaving contracts with a total 264.9 MW of interruptible capacity that would help reduce Kentucky Power's contribution to the AEP Zone peak, thereby lowering its share of the AEP Zone OATT Expense.[11]

Along the same lines and as further discussed by Company Witness Vaughan, Kentucky Power is proposing in this proceeding a program to allow it to construct various utility-owned solar generating assets throughout its service territory. These

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[10] Case No. 2021-00481, *Electronic Joint Application of American Electric Power Company, Inc., Kentucky Power Company and Liberty Utilities Co. for Approval of the Transfer of Ownership and Control of Kentucky Power Company*, Order at Appendix A, page 1 (May 4, 2022).

[11] *See* Case No. 2022-00424, *Electronic Tariff Filing of Kentucky Power Company for Approval of a Special Contract Under its Economic Development Rider and Demand Response Service Tariffs with Cyber Innovation Group, LLC*; Case No. 2022-00387, *Electronic Tariff Filing of Kentucky Power Company for Approval of a Special Contract with Ebon International, LLC. See also* TFS 2022-00249; TFS 2022-00073.

assets, which are not subject to the PJM queue for projects, would also have the effect of reducing Kentucky Power's contribution to the AEP Zone peak demand.

Q. PLEASE DISCUSS THE COMPANY'S INITIATION OF A REVIEW PROCESS CONCERNING PJM TRANSMISSION COSTS ALLOCATION AND ITS IMPACT ON KENTUCKY POWER AND THE OTHER AEP EAST OPERATING COMPANIES.

A. American Electric Power Service Corporation has initiated a review process to examine how PJM transmission costs are allocated to and among the Company and the other AEP operating companies operating in PJM ("AEP East Operating Companies"). The results of that review will inform recommendations concerning cost allocation, inclusive of the concerns identified by the Commission regarding transmission cost allocation impacts on the Company. The review is contemplated to result in information and recommendations intended to be shared with the Company and the other AEP East Operating Companies, the state regulatory commissions in each of the AEP East Operating Companies' respective jurisdictions, and with stakeholders in each of these state jurisdictions.

Q. HOW WILL THE ANALYSIS BE CONDUCTED TO ENSURE IT LOOKS AT ALL PERTINENT IDEAS INCLUDING ONES BEYOND THOSE PREVIOUSLY CONSIDERED?

A. AEPSC will retain an expert outside consultant to assist in performing an analysis of how PJM transmission costs are allocated to and among the AEP East Operating Companies, including the Company. AEPSC is in the process of retaining the outside consultant and anticipates that the review process may take between 5 and 8 months after the consultant is retained, absent unforeseen circumstances.

Q. WHAT ADDITIONAL ASSURANCES CAN THE COMPANY PROVIDE THAT THE ANALYSIS WILL ADDRESS THE COMMISSION'S CONCERNS?

A. The scope of work will expressly include the issues the Commission identified in its 2020 Rate Case Order. In addition, the Company commits to providing updates to the Commission about the progress of AEPSC's review every 30 days, beginning August 31, 2023, until the time the analysis is complete and recommendations from it are submitted to the Commission. The Company will file such updates as correspondence in this docket.

Q. WHAT WILL THE ANALYSIS EXAMINE AND WHAT STEPS WILL BE TAKEN BY AEPSC AS A RESULT OF THE ANALYSIS?

A. The Company anticipates that the analysis may include a review of historical and forecasted data and examine allocation of costs to and among the AEP East Operating Companies originating both from inside and from outside the AEP Zone. At the conclusion of the analysis process, AEPSC will share information and recommendations from the analysis with the Company and the other AEP East Operating Companies. The Company intends to provide this information to the Commission and expects that the other AEP East Operating Companies will provide it to their respective regulatory commissions and other stakeholders in a manner appropriate to each jurisdiction. It is anticipated that the results of the analysis will include recommendations and an evaluation of their implications for each of the AEP

East Operating Companies, including Kentucky Power. Although it is impossible to anticipate potential next steps that may follow, the Company does anticipate engaging in discussions with stakeholders regarding the results of the analysis, and the potential impacts of the analysis's recommendations.

Q. WHY IN LIGHT OF THE COMMISSION'S DIRECTIVES IS A FURTHER ANALYSIS BENEFICIAL OR NECESSARY?

A. Allocation of transmission costs is a complex subject involving a wide spectrum of stakeholders with competing and potentially incompatible interests. It is possible that different stakeholders, including state regulatory commissions, may have differing or incompatible views and objectives regarding the implementation of these recommendations. Thus, addressing the Commission's concerns requires careful consideration of the impacts on the Company and other stakeholders to ensure that solutions can be implemented which are achievable, appropriately match benefits and burdens of RTO participation, and mitigate risk that the ultimate outcome will not be beneficial to Kentucky. The analysis will allow AEPSC, with the input of an outside expert, to examine all facets of the cost allocation issues impacting the Company as well as their broader context for the AEP Zone and the AEP East Operating Companies. By taking a fresh look at these issues, AEPSC and its outside consultant will be able to identify more outcomes and address regulatory risks of any change to the cost allocation process.

Q. ARE THERE RISKS ASSOCIATED WITH SEEKING TO CHANGE COST ALLOCATION AT FERC?

A. Yes, it is not possible to predict what disputes will arise in the course of proceedings to modify cost allocation, or how FERC and the federal courts, as applicable, will resolve these disputes, or over what timeframe. There is a likelihood that at least some of the stakeholders involved will advocate for allocating a greater percentage of costs to be borne by Kentucky Power and its customers. Thus, it is possible that FERC (and subsequently federal courts reviewing FERC's decisions) may resolve disputes arising in ways contrary to positions advocated by Kentucky Power or by the Commission. Those decisions also may ultimately result in increases in transmission expenses to be borne by Kentucky Power's customers, compared to the current FERC-approved cost allocation methodology and transmission rates. Accordingly, the analysis is an important step to understanding not only potential solutions and cost allocation impacts of any identified option, but to also identify the legal and stakeholder risk.

VI. HOW KENTUCKY POWER'S PJM OATT EXPENSES AND REVENUES ARE DETERMINED

Q. CAN YOU PROVIDE CONTEXT PERTINENT TO KENTUCKY POWER'S PJM OATT EXPENSES AND REVENUES?

A. Yes. I provide factual background to explain how the Transmission OATT Revenues and Transmission OATT Expenses of Kentucky Power under current PJM agreements and processes. I also explain how the AEP Transmission Agreement affects how Kentucky Power net OATT revenues and expenses are determined, the beneficial impacts of membership in the agreement, and how options for the AEP Transmission

Agreement will be among those reviewed as part of the PJM transmission cost analysis described in Part V of my testimony.

Q. HOW IS OATT TRANSMISSION REVENUE DETERMINED FOR EACH TRANSMISSION OWNER?

A. This amount is determined by the FERC-approved wholesale transmission rates that have been established for each Transmission Owner. FERC has determined that the methodology used to calculate that amount results in just and reasonable rates to be paid by wholesale transmission customers. These rates determine a revenue requirement that reflects costs associated with the construction, operation, and maintenance of the facilities in the transmission system necessary for reliability, market efficiency, or other system needs. Company Witness Ali discusses these needs in detail in his testimony. These FERC-approved wholesale transmission rates are often referred to as formula rates, although some Transmission Owners use a stated rate structure.

Q. DOES KENTUCKY POWER HAVE FERC-APPROVED WHOLESALE TRANSMISSION RATES?

A. Yes. Kentucky Power has a FERC-approved formula rate to determine the cost incurred by Kentucky Power associated with its transmission facilities that PJM uses to provide transmission service to wholesale transmission customers. This is the Kentucky Power OATT Revenue and is Kentucky Power's wholesale transmission revenue requirement based on its role as a Transmission Owner in PJM.

Q. HOW IS KENTUCKY POWER'S OATT EXPENSE DETERMINED?

A. This is a multiple step process. First, PJM determines the total Transmission OATT Expense that will be paid collectively by all the wholesale transmission customers of the PJM transmission system. I will refer to this as the "Total PJM OATT Expense." This amount is based on the FERC-approved wholesale transmission rates that have been established for each Transmission Owner in PJM. PJM then allocates the Total PJM OATT Expense among the transmission zones that are shown in Attachment J to the PJM Tariff, including the AEP Zone, based on cost allocation rules that are included in the PJM OATT and approved by FERC. I will refer to the amount allocated to the AEP Zone as the "AEP Zone OATT Expense."

Next, PJM allocates to each LSE within the AEP Zone, including Kentucky Power, a share of the AEP Zone OATT Expense based on a measure of each LSE's relative use of the transmission system. The measure used by PJM is each LSE's contribution to the single highest hourly peak of the zone over a 12-month period ("1 Coincident Peak" or "1CP"). Every wholesale transmission customer in the AEP Zone is allocated a portion of AEP Zone OATT Expense, regardless of whether these transmission customers are affiliated or unaffiliated with AEP. This step is defined in the PJM OATT and approved by FERC.

Finally, under the AEP Transmission Agreement, AEP reallocates the Transmission OATT Expense charged to the members of this agreement, including Kentucky Power, using a slightly different measure of each member's relative use of the transmission system. The measure used is the average of each member's average contribution to the monthly peaks over a 12-month period ("12 Coincident Peaks" or

"12CP"). The amount allocated to Kentucky Power in this final step is the Kentucky Power OATT Expense.

Q. CAN YOU PLEASE EXPAND ON THE FIRST STEP WHERE PJM DETERMINES THE TOTAL PJM OATT EXPENSE THAT WILL BE PAID COLLECTIVELY BY ALL THE WHOLESALE TRANSMISSION CUSTOMERS OF THE PJM TRANSMISSION SYSTEM?

A. The Total PJM OATT Expense is the sum of the costs associated with the transmission facilities of all PJM Transmission Owners. In other words, it is the sum of the transmission revenue requirements of all the PJM Transmission Owners that I described above as OATT Transmission Revenue. This is the amount that PJM will collect in total from wholesale transmission customers for using the PJM transmission system.

Q. IN THE SECOND STEP DESCRIBED ABOVE WHERE PJM CHARGES EACH LSE WITHIN THE AEP ZONE A SHARE OF THE AEP ZONE OATT EXPENSE, WHY DOES PJM ALLOCATE THESE COSTS USING 1CP?

A. The default zonal allocation method in the PJM tariff is a 1CP, which allocates costs based on the single highest hourly demand on the system. The general reasoning behind a 1CP allocation is that the system overall is designed to accommodate this maximum peak, and so 1CP is selected to identify each LSE's contribution to it.

Q. TO HELP UNDERSTAND THE FINAL STEP DESCRIBED ABOVE WHERE AEP REALLOCATES THE TRANSMISSION OATT EXPENSE CHARGED TO MEMBERS OF THE AEP TRANSMISSION AGREEMENT, INCLUDING KENTUCKY POWER, CAN YOU PLEASE DESCRIBE THIS AGREEMENT?

A. The AEP Transmission Agreement is a FERC-approved agreement that governs the allocation of revenues and expenses among the AEP member load serving entities. It provides for the equitable sharing among the members of the costs incurred by the members in connection with the ownership and use of the transmission system.

Q. WHY IS 12CP USED IN THE AEP TRANSMISSION AGREEMENT TO REALLOCATE THE TRANSMISSION OATT EXPENSE CHARGED TO MEMBERS OF THIS AGREEMENT VERSUS THE 1CP METHOD USED BY PJM?

A. There is generally no "perfect" allocation method. In the case of 12CP, it is reasonable because it better reflects each load's use of the transmission system throughout the year as it is based on more than a single hour. Because loads use the transmission system more than a single hour, it is just and reasonable that that is reflected in what they are charged. Under a 1CP allocation, a load could theoretically shed 100% of its load during one hour of the year and not be assigned any costs for its use of the transmission system. Under a 12CP methodology it is more difficult for any single customer to shed load during that single 1CP and shift cost to other LSEs. Third and most important, use of the 12CP tends to be less volatile than 1CP. Each member's contribution to the 12CP is going to tend to change less from year to year than their 1CP contribution. Use of the 12CP thus helps the companies and their customers better manage their costs with reduced volatility. This is especially beneficial to customers in the AEP Zone as it traditionally can peak in either the summer or winter.

The AEP companies are geographically diverse. Some of the AEP companies tend to be summer-peaking, while others are winter-peaking, including Kentucky Power. If AEP used the 1CP method, individual AEP companies would be subject to volatile swings in expenses from year to year. Their cost would fluctuate significantly depending on whether the 1CP occurred in the summer or the winter. Over the past 10 years, the AEP Zone has peaked in the summer 6 times and the winter 4 times. The 12CP method results in more stable cost sharing among the AEP companies than other alternatives.

Q. WILL THE TRANSMISSION ANALYSIS DESCRIBED IN PART V OF YOUR TESTIMONY EXAMINE OPTIONS FOR MODIFYING COST ALLOCATION UNDER THE AEP TRANSMISSION AGREEMENT THAT MAY BENEFIT KENTUCKY OR ITS WITHDRAWAL FROM THE AGREEMENT?

A. Yes, I expect the analysis will address these topics and more, from both a Kentucky Power viewpoint as well as in the broader context of how costs and benefits from PJM participation are allocated among the AEP East Operating Companies. The complexity of analyzing this issue is one of the reasons the analysis is needed. As Company Witness Pearce testified in Case No. 2020-00174, switching from 12CP to 1CP would have lowered Kentucky Power's net OATT expense in some historical years (2014, 2017, and 2018), and raised it over others (2015, 2016, 2019, and 2020) such that over the time period examined, Kentucky Power customers would have paid more using

1CP than they paid under the 12CP method of allocation.[12] Thus, the question of changing methodologies requires careful consideration to ensure *future* changes are beneficial. For example, switching to 1 CP, including by withdrawing from the agreement under Section 9.3 of the AEP Transmission Agreement (which allows a member to withdraw from the agreement upon at least three years' prior written notice) would subject Kentucky Power and its customers to greater volatility in Transmission OATT Expense. Based on these considerations, it would be premature to change Kentucky Power's participation in that agreement before the PJM transmission cost allocation analysis I described earlier is complete.

VII. CONCLUSION

Q. DO YOU HAVE A SUMMARY RECOMMENDATION?

A. The Company, consistent with the directives of the Commission in its previous rate case and other proceedings, considers ways to manage, and to the extent possible reduce, its Transmission OATT Expenses. The Company is aware of recommendations previously made and questions previously asked by stakeholders aimed at the possibility of a drastic change with Kentucky Power's membership in PJM, the AEP Zone, and the AEP Transmission Agreement. My testimony describes the steps the Company has taken to address those recommendations and questions. It also highlights that the risks associated with those possibilities are significant, exposing Kentucky Power's customers to a material risk of experiencing greater costs, greater volatility, and greater uncertainty. The Company continues to consider these risks within the

[12] Supplemental amended rebuttal testimony of Kelly D. Pearce, Case No. 2020-00174.

context of its efforts to manage its Transmission OATT Expenses and remains open to future dialogue and to input from stakeholders on this subject.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

VERIFICATION

The undersigned, Joshua D. Burkholder, being duly sworn, deposes and says he is the Managing Director of Transmission RTO Policy, for American Electric Power Service Corporation, that he has personal knowledge of the matters set forth in the foregoing testimony and the information contained therein is true and correct to the best of his information, knowledge, and belief after reasonable inquiry.

Joshua D. Burkholder

Commonwealth of Kentucky	)	
	)	Case No. 2023-00159
County of Boyd	)	

Subscribed and sworn to before me, a Notary Public in and before said County and State, by Joshua D. Burkholder, on June 21, 2023.

Scott E. Bishop
Notary Public

SCOTT E. BISHOP
Notary Public
Commonwealth of Kentucky
Commission Number KYNP32110
My Commission Expires Jun 24, 2025

My Commission Expires June 24, 2025

Notary ID Number KYNP 32110

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

Electronic Application Of Kentucky Power Company For (1) A General Adjustment Of Its Rates For Electric Service; (2) Approval Of Tariffs And Riders; (3) Approval Of Accounting Practices To Establish Regulatory Assets And Liabilities; (4) A Securitization Financing Order; And (5) All Other Required Approvals And Relief	))))))	Case No. 2023-00159

DIRECT TESTIMONY OF

KATHERINE STEWARD

ON BEHALF OF KENTUCKY POWER COMPANY

DIRECT TESTIMONY OF
KATHERINE STEWARD ON BEHALF OF
KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

CASE NO. 2023-00159

TABLE OF CONTENTS

EXHIBITS

EXHIBIT	DESCRIPTION
Exhibit 1	Qualifications
Exhibit 2	Zero Intercept Study

DIRECT TESTIMONY OF
KATHERINE STEWARD ON BEHALF OF
KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

CASE NO. 2023-00159

I. INTRODUCTION

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

A. My name is Katherine Steward and I am an Economist with Clearspring Energy Advisors. My business address is 1050 Regent Street, Suite L-3, Madison, WI 53715.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING?

A. I am testifying on behalf of Kentucky Power, which provides electric service to approximately 163,400 customers in eastern Kentucky.

Q. BRIEFLY DESCRIBE YOUR EDUCATION AND WORK EXPERIENCE.

A. I have a master's degree in applied economics and my work experience includes working for consulting firms who specialize in revenue requirement and cost of service analyses, rate design, load forecasting, and other economic analyses.

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to describe and present the results of a zero intercept study performed at the Company's request, pursuant to the Commission's Orders dated January 13, 2021, and February 22, 2021, in Case No. 2020-00174.[1]

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[1] *In the Matter of: Electronic Application Of Kentucky Power Company For (1) A General Adjustment Of Its Rates For Electric Service; (2) Approval Of Tariffs And Riders; (3) Approval Of Accounting Practices To Establish Regulatory Assets And Liabilities; (4) Approval Of A Certificate Of Public Convenience And Necessity; And (5) All Other Required Approvals And Relief*, Case No. 2020-00174 ("2020 Rate Case").

Q. ARE YOU SPONSORING ANY EXHIBITS?

A. Yes. I have prepared the following exhibits to support my testimony:

Exhibit 1 – Qualifications

Exhibit 2 – Zero Intercept Study

III. <u>ZERO INTERCEPT THEORY</u>

Q. WHAT DID THE COMMISSION REQUIRE IN THE PREVIOUSLY REFERENCED ORDERS IN CASE NO. 2020-00174?

A. On page 53 of the January 13, 2021 Order, the Commission held the following:

> For its COSS, Kentucky Power applied a version of the minimum size method for poles, conductors, and transformers by basing the fixed distribution plant allocation factors upon the typical distribution plant component size when connecting the average distribution level customer. While use of the minimum sized method, or in this case, something similar, is not uncommon, typically it is defaulted to when the zero-intercept method results in statistically unreliable results. Kentucky Power stated that it did not perform the zero-intercept method, stating that it did not have the detailed information needed to properly perform the zero-intercept method. The Commission believes that such modeling should be performed first and finds that Kentucky Power should perform a zero-intercept study in its next base rate case.[2]

On rehearing the Commission clarified:

> The Commission finds that rehearing should be granted for the limited purpose of clarifying that Kentucky Power should conduct a zero-intercept study for its cost of service study in its next rate case. Recently, the Commission has noted its preference for the zero-intercept method stating the following:
>
> > Due to its use of linear regression equations relating cost to various sizes of equipment rather than choosing what would be the minimum pole, conductor, or line transformer needed to serve a customer, the zero-intercept method is preferred because it is considered less subjective than the minimum system. Furthermore, comparative studies between the minimum-size and zero-intercept methods suggest that the minimum system method produces a larger customer

[2] Order at 53, 2020 Rate Case (Ky. P.S.C. January 13, 2021) (internal footnotes omitted).

component.

Therefore, in its next base rate case, Kentucky Power must include support for the reasonableness of the data that it provides and any assumptions made by Kentucky Power should be well supported and documented.[3]

Q. WHAT IS A ZERO INTERCEPT STUDY?

A. *The Electric Utility Cost Allocation Manual* published by the National Association of Regulatory Utility Commissioners ("NARUC") dated January 1992 ("NARUC CAM") identifies the zero-intercept (or "minimum intercept") as one of two standard methodologies for classifying distribution fixed costs. The NARUC CAM states that certain distribution costs should be functionally classified as customer-related and demand-related in a cost of service study.

Costs classified as *demand-related* vary with the capacity needs of customers, such as the amount of transmission or distribution equipment necessary to meet a customer's needs, or other elements that are related to facility size. Distribution substation transformers are examples of costs typically classified as demand costs. Costs classified as *customer-related* include costs incurred to serve customers regardless of the quantity of electric energy purchased or the peak requirements of the customers and vary with the number of customers. These include the cost of the minimum system necessary to provide a customer with access to the electric grid. The zero intercept method is used to divide distribution costs related to poles, overhead conductor, underground conductor, and line transformers between the demand-related and customer-related categories.

[3] Order at 23, 2020 Rate Case (Ky. P.S.C. February 22, 2021) (internal footnotes omitted).

Stated differently, the zero-intercept method provides a rational basis for separating the cost of a device between its customer and demand components. Theoretically, the customer-related costs are associated with the portion of facilities that do not require any capacity or size – one might call this the 'zero-sized' facility cost – and then the rest of the facility costs are demand-related, because they are associated with the portion of facilities that do require capacity or non-zero size.

Q. HOW DOES THE ZERO INTERCEPT METHOD GENERALLY WORK?

A. The zero-intercept method uses linear regression to determine the theoretical cost for connecting a customer of zero size to the grid. Linear regression is a statistical analysis used to predict the value of a variable based on the value of another variable; it attempts to model the relationship between two variables by fitting a linear equation to observed data. In this application, the linear regression attempts to predict the cost of a theoretically 'zero-sized' facility (e.g., pole, conductor, transformer) based on the sizes and costs of existing facilities on the utility books. This method is less subjective than other approaches and is preferred when the necessary data are available. With the zero-intercept method, a zero-size conductor or line transformer is the absolute minimum system, or the smallest amount of facility investment needed to serve a customer regardless of their demand, and thus is customer-related. Any costs above that minimum must be related to demand.

Q. WHAT IS THE THEORY BEHIND THE ZERO-INTERCEPT METHOD?

A. The theory behind the zero-intercept method is that there is a linear relationship between the unit cost ($/ft or $/transformer) of conductor or line transformers and the load flow capability of the plant, which is proportionate to the cross-sectional area of the conductor or the kVA rating of the transformer. After establishing a linear relation, which is given by the equation:

$$y = a + bx$$

where:

y is the unit cost of the conductor or transformer,

x is the size of the conductor (MCM) or transformer (kVA), and

a, **b** are the coefficients representing the intercept and slope, respectively,

it can be determined that, theoretically, the unit cost of a pole or foot of conductor or transformer with zero size (or conductor or transformer with zero load carrying capability) is a, the zero-intercept. The zero-intercept is essentially the cost component of poles, conductor or transformers that is invariant to the size and load carrying capability of the plant.

For most electric utilities, the feet of conductor and number of transformers on the system are not uniformly distributed over all sizes of wire and transformer. In other words, a utility might have more of size 1/0 conductor than it has of size 2/0 conductor, or it might have more 10 kVA transformers than 15 kVA transformers. The number of facilities of various sizes are not the same, so each size must be weighted by quantity in the linear regression analysis. For this reason, it is necessary to use a *weighted* regression analysis, instead of a standard least-squares analysis, in the determination of the zero intercept. Without performing a weighted regression analysis, all types of conductor and transformers would have the same impact on the analyses, even though the quantity of conductor and transformers are not the same for each size and type.

Using a weighted regression analysis, the cost and size of each type of conductor, pole or transformer is weighted by the number of feet of installed conductor or the number of poles or transformers. In a weighted regression analysis, the following weighted sum of squared differences is minimized, where **w** is the weighting factor for each size of conductor or transformer, and **y** is the observed value and **ŷ** is the predicted value of the dependent variable:

$$\sum_i w_i (y_i - \hat{y}_i)^2$$

Q. DOES THE NARUC CAM PROVIDE INSTRUCTIONS FOR THE ZERO INTERCEPT ANALYSIS?

A. Yes. The NARUC CAM provides the following instructions for overhead conductor, underground conductor, and transformers on pages 92-94. The instructions are summarized as follows:

Account 364 – Poles, Towers, and Fixtures

Determine minimum intercept of pole cost using cost per foot by classes and heights of poles weighted by the number of poles in each category and developing a cost for the utility's minimum size pole.

Account 365 – Overhead Conductors and Devices

Determine minimum intercept of conductor cost per foot using cost per foot by size and type of conductor weighted by feet or investment in each category and developing a cost for the utility's minimum size conductor.

Account 366 and 367 – Underground Conduit, and Underground Conductors and Devices

Determine minimum intercept of cable cost per foot using cost per foot by size and type of cable weighted by feet of investment in each category.

Account 368 – Line Transformers

Determine zero intercept of transformer cost using cost per transformer by type, weighted by number for each category. Only single-phase sizes up to and including 50 kVA should be used.

Q. WHAT KIND OF RESULTS DOES THE ZERO INTERCEPT ANALYSIS PROVIDE?

A. The zero-intercept analysis provides the theoretical cost per unit for a zero-sized facility. In other words, it provides the cost of a zero-foot pole, the cost per length for conduit of zero cross-sectional area, and the cost for a transformer of zero kVA capacity. These must be positive numbers for the results to be meaningful; if the linear regression produces a negative zero intercept, then the cost per unit would be less than zero, which is unreasonable. If the zero intercept is positive, it can be multiplied by the total number of units (i.e. number of poles, length of conductor, or number of transformers) to determine the theoretical total cost of zero-sized facilities. This cost in dollars is the share of total facility costs that is customer-related; any remaining costs are demand-related. The two resultant dollar amounts can then be used to develop a percentage share for customer and a percentage share for demand, and these percentages can be used in a cost of service study or other applications to split facility costs between customer and demand classifications.

Q. HAVE YOU PREPARED EXHIBITS SHOWING THE RESULTS OF THE ZERO-INTERCEPT ANALYSIS?

A. Yes. The zero-intercept analysis for poles, overhead conductor, underground conductor, and line transformers are included in Exhibit 2.

IV. ZERO INTERCEPT RESULTS

Q. PLEASE DESCRIBE THE PROCESS UNDERTAKEN TO PERFORM THE ZERO INTERCEPT STUDY.

A. To perform the study, Company records were provided. These records include cost and quantity for poles in Account 364, conductor in Accounts 365 and 367, and transformers in Account 368. This data was then input to a linear regression calculation to identify the zero intercept for each of the respective accounts. For poles, the size of the facility is the pole height from Company records. For conductor, the size is the cross-sectional area of the conductor in kcmil (where 1 kcmil = 0.5067 mm^2). This information is available in electrical industry handbooks. For transformers, the size is the transformer kilovolt-amperes (kVA) from Company records.

Q. DID THE ZERO INTERCEPT ANALYSIS PROVIDE A REASONABLE SOLUTION FOR ACCOUNT 364 – POLES?

A. No. The linear regression provided a zero intercept that is less than zero, which is unreasonable. This is a very common outcome for the zero intercept analysis for poles, which is why some utilities in Kentucky (including Kentucky Utilities Company and Louisville Gas & Electric Company) split pole costs between demand and customer in rate cases using the zero intercept study results for overhead conductor, since the two are mutually dependent (i.e., overhead conductor requires poles, and poles are only required for overhead conductor).

Q. DID THE ZERO INTERCEPT ANALYSIS PROVIDE A REASONABLE SOLUTION FOR THE OTHER ACCOUNTS?

A. Yes. The zero intercept results for Account 365 – Overhead Conductor, Account 367 - Underground Conductor, and Account 368 – Transformers were all mathematically sound and provide a reasonable basis for separating the cost of these facilities between their customer and demand components. These results are provided in Exhibit 2.

V. <u>CONCLUSION</u>

Q. PLEASE SUMMARIZE YOUR FINDINGS AND RECOMMENDATIONS.

A. The zero intercept study provided in Exhibit 2 provides a mathematically sound and rational basis for separating the costs for overhead conduit, underground conduit, and line transformers between their customer and demand components. It is also reasonable to apply the zero intercept study results for overhead conductor to poles, since the two are interdependent and since the Commission has accepted this numerous times in electric rate filings. The study is consistent with industry standard methods, meets the requirements of the Commission's Orders in Case No. 2020-00174, and should be accepted by the Commission.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

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Steward Verification Form.doc

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E-Signature Summary

E-Signature 1: Katherine Steward (KS)
June 23, 2023 10:13:40 -8:00 [93796B82B379] [104.187.152.60]
katherine.steward@clearspringenergy.com (Principal) (Personally Known)

E-Signature Notary: Jennifer Young (JAY)
June 23, 2023 10:13:40 -8:00 [DE700A179079] [161.235.221.106]
jayoung1@aep.com
I, Jennifer Young, did witness the participants named above electronically sign this document.

VERIFICATION

The undersigned, Katherine Steward, being duly sworn, deposes and says she is an Economist, for Clearspring Energy Advisors, that she has personal knowledge of the matters set forth in the foregoing testimony and the information contained therein is true and correct to the best of her information, knowledge, and belief after reasonable inquiry.

Katherine Steward
Signed on 2023/06/23 10:13:40 -8:00

Katherine Steward

Commonwealth of Kentucky)
) Case No. 2023-00159
County of Boyd)

Subscribed and sworn to before me, a Notary Public in and before said County and State, by Katherine Steward, on June 23, 2023.

JENNIFER A. YOUNG
ONLINE NOTARY PUBLIC
STATE AT LARGE KENTUCKY
Commission # KYNP31964
My Commission Expires Jun 21, 2025
Notary Stamp 2023/06/23 10:13:40 PST DE700A179079

Signed on 2023/06/23 10:13:40 -8:00

Notary Public

Notarial act performed by audio-visual communication

My Commission Expires ______06/21/25____________

Notary ID Number ____KYNP31964________________

Katherine Steward

SUMMARY OF QUALIFICATIONS

Provides consulting services to cooperative, investor-owned, and municipal utilities regarding cost-of-service and rate design studies, load research and consulting, survey design and implementation, and demand side management.

PROFESSIONAL EXPERIENCE

Clearspring Energy Advisors – Madison, WI (2022-Present)

Economist

Responsible for supporting load forecasting, cost-of-service, and data analysis consulting projects for utilities and regulators. Provide survey design, implementation, and analysis.

Power System Engineering, Inc. – Madison, WI (2021-2022)

Utility Rate and Financial Analyst

Provided consulting services to utilities and regulators in the areas of revenue requirements and cost-of-service, rate design, data analysis, demand-side management, and customer segmentation.

Apex Analytics, LLC – Madison, WI (2019-2021)

Quantitative Analyst

Assisted in the completion of evaluation, measurement, and verification projects for investor-owned electric and gas utilities in the areas of energy efficiency, demand response, benchmarking, and market research.

EDUCATION

Bachelor of Science, Economics, University of Wisconsin-Madison, 2016

Master of Science, Applied Economics, University of Wisconsin-Madison, 2019

Kentucky Power
Zero Intercept & Minimum System Analyses

Account 365 - Overhead Conductors and Devices **PRIMARY**

#	Description	Area from Table of Conductor Sizes Size	Cost	Quantity	Actual Unit Cost ($ per Unit)	Linear Regression Inputs y*n^0.5	n^0.5	xn^0.5
1	1/0AA	105.53	$ 1,893.03	1,198	1.58	54.69	34.61	3,652.83
2	2AA	66.37	1,454.85	1,335	1.09	39.82	36.53	2,424.71
3	2AS	66.37	122.08	112	1.09	11.54	10.58	702.38
4	4/0AA	211.59	4,396.13	2,326	1.89	91.15	48.23	10,204.78
5	4/0AL	211.59	756.00	400	1.89	37.80	20.00	4,231.84
6	556AL	556.00	27,932.50	9,976	2.80	279.66	99.88	55,532.94
7	1/0AL	105.53	1,137.60	720	1.58	42.40	26.83	2,831.69
8	2AA	66.37	3,231.27	2,964	1.09	59.35	54.45	3,613.59
9	4CU	41.74	896.40	270	3.32	54.55	16.43	685.86
10	4/0AA	211.59	3,160.07	1,672	1.89	77.28	40.89	8,652.01
11	556AL	556.00	7,209.92	2,575	2.80	142.08	50.74	28,213.76
12	750AL	750.00	20,517.17	5,399	3.80	279.22	73.48	55,109.72
13	1AA	83.69	638.32	404	1.58	31.76	20.10	1,682.15
14	1/0AA	105.53	783,210.31	495,703	1.58	1,112.42	704.06	74,300.32
15	1/0AL	105.53	45,646.44	28,890	1.58	268.55	169.97	17,937.21
16	1/0AS	105.53	44,413.67	28,110	1.58	264.90	167.66	17,693.34
17	1/0CU	105.53	9,689.84	2,842	3.41	181.78	53.31	5,625.50
18	1/0CW	105.53	5,801.44	1,701	3.41	140.65	41.25	4,352.82
19	2A5	66.37	1,003.74	921	1.09	33.08	30.35	2,014.02
20	2AA	66.37	15,739,381.76	14,439,800	1.09	4,141.97	3,799.97	252,200.45
21	2AL	66.37	361,086.50	331,272	1.09	627.36	575.56	38,199.50
22	2AS	66.37	3,865,958.84	3,546,751	1.09	2,052.78	1,883.28	124,991.55
23	2CC	66.37	6,316.90	2,163	2.92	135.81	46.51	3,086.92
24	2CU	66.37	99,842.22	34,193	2.92	539.94	184.91	12,272.44
25	2CW	66.37	2,622.15	898	2.92	87.50	29.97	1,988.85
26	2Unknown	66.37	660.04	606	1.09	26.82	24.61	1,633.19
27	2/0AA	133.07	332.94	179	1.86	24.89	13.38	1,780.38
28	2/0AL	133.07	65.10	35	1.86	11.00	5.92	787.26
29	2AAA	66.37	137.34	126	1.09	12.24	11.22	744.99
30	2ACC	66.37	61,645.45	21,111	2.92	424.27	145.30	9,643.27
31	3/0AA	167.80	724.88	328	2.21	40.02	18.11	3,038.98
32	3/0AS	167.80	2,194.53	993	2.21	69.64	31.51	5,287.69
33	336AS	336.00	4,347.47	1,732	2.51	104.46	41.62	13,983.65
34	4A5	41.74	576.85	695	0.83	21.88	26.36	1,100.38
35	4AA	41.74	13,688.36	16,492	0.83	106.59	128.42	5,360.30
36	4AL	41.74	6,778.94	8,167	0.83	75.01	90.37	3,772.20
37	4AS	41.74	879,488.70	1,059,625	0.83	854.39	1,029.38	42,966.36
38	4CC	41.74	1,152.04	347	3.32	61.84	18.63	777.53
39	4CU	41.74	14,501,311.12	4,367,865	3.32	6,938.61	2,089.94	87,234.25
40	4CW	41.74	24,776.93	7,463	3.32	286.81	86.39	3,605.85
41	4Unknown	41.74	341.13	411	0.83	16.83	20.27	846.20
42	4/0AA	211.59	117,772.32	62,313	1.89	471.79	249.63	52,818.97
43	4/0AL	211.59	5,773.56	3,055	1.89	104.46	55.27	11,694.73
44	4/0AS	211.59	30,304.83	16,034	1.89	239.32	126.63	26,793.18
45	4/0CU	211.59	27,473.21	4,845	5.67	394.68	69.61	14,728.63
46	4AAS	41.74	217.46	262	0.83	13.43	16.19	675.62
47	4ACC	41.74	305,950.09	167,186	1.83	748.26	408.88	17,066.80
48	556AL	556.00	22,034.89	7,870	2.80	248.39	88.71	49,323.20
49	6AA	26.25	6,180.64	7,447	0.83	71.62	86.29	2,265.29
50	6AL	26.25	2,695.00	3,247	0.83	47.30	56.98	1,495.84
51	6AS	26.25	3,588.47	4,323	0.83	54.58	65.75	1,726.08
52	6CC	26.25	762,238.65	725,942	1.05	894.62	852.02	22,366.43
53	6CU	26.25	181,019.60	172,400	1.05	435.97	415.21	10,899.69
54	6CW	26.25	380.10	362	1.05	19.98	19.03	499.46
55	6Unknown	26.25	443.93	535	0.83	19.20	23.13	607.11
56	6ACC	26.25	2,488,985.49	2,370,462	1.05	1,616.61	1,539.63	40,416.84
57	6ACU	26.25	1,595.93	1,520	1.05	40.94	38.99	1,023.43
58	8AA	16.51	571.87	689	0.83	21.79	26.25	433.34
59	8CC	16.51	58,743.12	70,775	0.83	220.81	266.04	4,391.98
60	8ACC	16.51	97,683.27	117,691	0.83	284.74	343.06	5,663.59
61	1/0AA	105.53	22,374.88	5,827	3.84	293.12	76.33	8,055.54
62	1/0AL	105.53	18,400.27	4,792	3.84	265.81	69.22	7,305.11
63	2AA	66.37	2,324.16	848	2.74	79.80	29.12	1,932.96

Kentucky Power
Zero Intercept & Minimum System Analyses

Account 365 - Overhead Conductors and Devices **PRIMARY**

#	Description	Area from Table of Conductor Sizes Size	Cost	Quantity	Actual Unit Cost ($ per Unit)	Linear Regression Inputs y*n^0.5	n^0.5	xn^0.5
64	2AL	66.37	2,400.24	876	2.74	81.10	29.60	1,964.34
65	4/0AA	211.59	59,360.12	10,773	5.51	571.90	103.79	21,961.95
66	4/0AL	211.59	24,828.94	4,506	5.51	369.87	67.13	14,203.73
67	4/0AS	211.59	2,231.55	405	5.51	110.89	20.12	4,258.20
68	556AL	556.00	733,327.21	103,286	7.10	2,281.80	321.38	178,687.64
69	1AA	83.69	330.22	209	1.58	22.84	14.46	1,209.89
70	1/0AA	105.53	3,437,418.97	2,175,582	1.58	2,330.48	1,474.99	155,656.67
71	1/0AL	105.53	208,687.01	132,080	1.58	574.22	363.43	38,352.99
72	1/0AS	105.53	312,523.61	197,800	1.58	702.70	444.75	46,934.58
73	1/0CU	105.53	50,554.49	14,825	3.41	415.20	121.76	12,849.40
74	1/0CW	105.53	20,209.65	5,927	3.41	262.52	76.98	8,124.23
75	1/0Unknown	105.53	3,432.22	2,172	1.58	73.64	46.61	4,918.57
76	2A5	66.37	381.50	350	1.09	20.39	18.71	1,241.65
77	2AA	66.37	3,727,401.52	3,419,634	1.09	2,015.66	1,849.23	122,731.24
78	2AL	66.37	83,065.34	76,207	1.09	300.90	276.06	18,321.54
79	2AS	66.37	762,514.27	699,554	1.09	911.67	836.39	55,510.61
80	2CU	66.37	256,914.44	87,984	2.92	866.14	296.62	19,686.48
81	2CW	66.37	25,224.84	8,639	2.92	271.40	92.94	6,168.62
82	2/0AS	133.07	2,691.91	1,447	1.86	70.76	38.04	5,062.45
83	2/0CU	133.07	3,482.96	835	4.17	120.52	28.90	3,845.85
84	2ACC	66.37	11,402.81	2,734	4.17	218.06	52.29	3,470.59
85	3/0AA	167.80	3,413.33	1,544	2.21	86.85	39.30	6,594.55
86	3/0AL	167.80	1,610.18	729	2.21	59.65	26.99	4,529.33
87	3/0AS	167.80	219,777.20	99,447	2.21	696.93	315.35	52,916.02
88	3/0CU	167.80	3,730.77	760	4.91	135.34	27.57	4,625.41
89	336AA	336.00	26,398.59	10,517	2.51	257.41	102.55	34,458.21
90	336AL	336.00	21,957.86	8,748	2.51	234.76	93.53	31,426.60
91	336AS	336.00	131,860.21	52,534	2.51	575.30	229.20	77,012.16
92	350AL	350.00	2,069.10	589	3.51	85.22	24.28	8,497.77
93	397AS	397.00	9,008.16	2,642	3.41	175.27	51.40	20,404.75
94	4AA	41.74	4,719.06	5,686	0.83	62.58	75.40	3,147.32
95	4AL	41.74	7,344.67	8,849	0.83	78.08	94.07	3,926.44
96	4AS	41.74	26,517.71	31,949	0.83	148.36	178.74	7,460.73
97	4CU	41.74	2,468,605.02	743,556	3.32	2,862.83	862.30	35,992.27
98	4CW	41.74	9,747.45	2,936	3.32	179.89	54.18	2,261.67
99	4/0A5	211.59	756.00	400	1.89	37.80	20.00	4,231.84
100	4/0AA	211.59	6,249,724.02	3,306,732	1.89	3,436.86	1,818.44	384,767.84
101	4/0AL	211.59	472,858.21	250,190	1.89	945.36	500.19	105,836.10
102	4/0AS	211.59	233,696.27	123,649	1.89	664.59	351.64	74,403.65
103	4/0CU	211.59	256,379.97	45,217	5.67	1,205.68	212.64	44,993.50
104	4ACC	41.74	236,197.81	35,412	6.67	1,255.17	188.18	7,854.66
105	556AL	556.00	6,812,539.94	2,433,050	2.80	4,367.51	1,559.82	867,261.98
106	6AA	26.25	833.93	1,005	0.83	26.31	31.70	832.09
107	6AL	26.25	560.99	676	0.83	21.58	26.00	682.47
108	6AS	26.25	607.63	732	0.83	22.46	27.06	710.28
109	6CC	26.25	99,136.46	94,416	1.05	322.63	307.27	8,066.18
110	6CU	26.25	54,351.89	51,764	1.05	238.89	227.52	5,972.53
111	6ACC	26.25	68,858.85	65,580	1.05	268.89	256.09	6,722.50
112	795AL	795.00	211.02	56	3.80	28.32	7.45	5,924.31
113	8CC	16.51	5,561.72	6,701	0.83	67.94	81.86	1,351.41
114	8ACC	16.51	17,378.25	20,938	0.83	120.10	144.70	2,388.83
115	2AA	66.37	423.90	389	1.09	21.50	19.72	1,308.83
116	556AL	556.00	10,911.51	3,897	2.80	174.79	62.43	34,708.68
117	1/0AA	105.53	282.02	178	1.58	21.11	13.36	1,409.90
118	1/0AL	105.53	191,923.62	121,471	1.58	550.67	348.53	36,780.34
119	1/0CU	105.53	11,268.21	3,304	3.41	196.02	57.48	6,066.39
120	2AA	66.37	37,933.99	34,802	1.09	203.34	186.55	12,381.30
121	2AL	66.37	18,504.76	16,977	1.09	142.02	130.30	8,647.56
122	2CU	66.37	3,162.92	1,083	2.92	96.10	32.91	2,184.33
123	4CU	41.74	1,546.49	466	3.32	71.65	21.58	900.86

Kentucky Power
Zero Intercept & Minimum System Analyses

Account 365 - Overhead Conductors and Devices **PRIMARY**

#	Description	Area from Table of Conductor Sizes Size	Cost	Quantity	Actual Unit Cost ($ per Unit)	Linear Regression Inputs y*n^0.5	n^0.5	xn^0.5
124	4/0AL	211.59	36,559.57	19,344	1.89	262.86	139.08	29,428.55
125	500AL	500.00	450.83	161	2.80	35.53	12.69	6,344.52
126	6AL	26.25	505.06	609	0.83	20.47	24.67	647.56
127	6CC	26.25	257.25	245	1.05	16.44	15.65	410.89
128	6CU	26.25	367.50	350	1.05	19.64	18.71	491.11
129	750AL	750.00	25,103.57	6,606	3.80	308.86	81.28	60,958.91
130	750CU	750.00	1,140.00	300	3.80	65.82	17.32	12,990.38
131	1/0AA	105.53	9,665.54	6,117	1.58	123.58	78.21	8,254.00
132	1/0AL	105.53	418.70	265	1.58	25.72	16.28	1,717.92
133	1/0AS	105.53	1,308.99	828	1.58	45.48	28.78	3,037.52
134	2AA	66.37	27,987.29	25,676	1.09	174.66	160.24	10,634.88
135	2AL	66.37	1,075.83	987	1.09	34.24	31.42	2,085.08
136	2AS	66.37	5,937.39	5,447	1.09	80.45	73.80	4,898.35
137	3/0AS	167.80	556.92	252	2.21	35.08	15.87	2,663.74
138	4CU	41.74	27,174.15	8,185	3.32	300.36	90.47	3,776.26
139	4/0AA	211.59	68,665.81	36,331	1.89	360.25	190.61	40,330.97
140	4/0AL	211.59	2,666.08	1,411	1.89	70.99	37.56	7,947.03
141	4/0AS	211.59	563.57	298	1.89	32.64	17.27	3,653.79
142	4ACC	41.74	5,137.71	1,548	3.32	130.60	39.34	1,641.98
143	556AL	556.00	98,534.73	35,191	2.80	525.26	187.59	104,301.47
144	6CC	26.25	852.60	812	1.05	29.92	28.50	748.04
145	6ACC	26.25	158.55	151	1.05	12.90	12.29	322.58
146	TOTAL		$ 68,459,133.83	42,863,703				
147								
148	**Zero Intercept Linear Regression Results**					**LINEST Array**		
149								
150	Size Coefficient ($ per MCM)		0.00282			0.00282	1.29842	
151	Zero Intercept ($ per Unit)		1.29842			0.00054	0.08754	
152	R-Square		0.8078			0.80779	436.75140	
153								
154	**Plant Classification**							
155								
156	Total Number of Units		42,863,703					
157	Zero Intercept ($/Unit)		$ 1.30					
158	Minimum System ($/Unit)		$ 0.83					
159	Use Min System (M) or Zero Intercept (Z)?		Z					
160	Zero Intercept or Min System Cost ($)		$ 55,655,089					
161	Total Cost of Sample		$ 68,459,134					
162	Percentage of Total		0.8130					
163	Percentage Classified as Customer-Related		81.30%					
164	Percentage Classified as Demand-Related		18.70%					

Kentucky Power
Zero Intercept & Minimum System Analyses

Account 365 - Overhead Conductors and Devices **SECONDARY**

#	Description	Size	Cost	Quantity	Actual Unit Cost ($ per Unit)	Linear Regression Inputs y*n^0.5	n^0.5	xn^0.5
1	1/0AA	105.53	$ 2,049.26	1,297	1.58	56.90	36.01	3,800.58
2	1/0AL	105.53	821.60	520	1.58	36.03	22.80	2,406.47
3	2AA	66.37	141,083.14	129,434	1.09	392.15	359.77	23,877.54
4	2AL	66.37	11,264.53	10,334	1.09	110.81	101.66	6,746.97
5	2AS	66.37	4,609.18	4,229	1.09	70.88	65.03	4,315.83
6	2CU	66.37	694.81	238	2.92	45.04	15.43	1,023.78
7	336AL	336.00	439.25	175	2.51	33.20	13.23	4,444.86
8	4AA	41.74	483.89	583	0.83	20.04	24.15	1,007.83
9	4AL	41.74	382.58	461	0.83	17.82	21.47	896.13
10	4AS	41.74	710.48	856	0.83	24.28	29.26	1,221.21
11	4CU	41.74	27,674.96	8,336	3.32	303.12	91.30	3,810.89
12	4CW	41.74	315.40	95	3.32	32.36	9.75	406.83
13	4/0AA	211.59	3,247.01	1,718	1.89	78.34	41.45	8,770.22
14	6CC	26.25	1,220.10	1,162	1.05	35.79	34.09	894.85
15	6CU	26.25	888.30	846	1.05	30.54	29.09	763.54
16	6ACC	26.25	1,082.55	1,031	1.05	33.71	32.11	842.90
17	8ACC	16.51	553.50	270	2.05	33.68	16.43	271.27
18	1AA	83.69	502.44	318	1.58	28.18	17.83	1,492.40
19	1/0AA	105.53	34,093.61	21,578	1.58	232.09	146.90	15,502.01
20	1/0AL	105.53	14,351.58	9,083	1.58	150.58	95.31	10,057.76
21	1/0AS	105.53	82,388.14	52,144	1.58	360.80	228.35	24,098.16
22	1/0CC	105.53	272.80	80	3.41	30.50	8.94	943.90
23	1/0CU	105.53	634.26	186	3.41	46.51	13.64	1,439.25
24	2A5	66.37	170.04	156	1.09	13.61	12.49	828.95
25	2AA	66.37	119,867.75	109,970	1.09	361.46	331.62	22,009.15
26	2AL	66.37	15,637.23	14,346	1.09	130.55	119.78	7,949.36
27	2AS	66.37	200,762.59	184,186	1.09	467.79	429.17	28,483.50
28	2CC	66.37	1,305.81	447	2.92	61.75	21.15	1,403.51
29	2CU	66.37	45,565.22	15,605	2.92	364.76	124.92	8,290.69
30	2CW	66.37	440.92	151	2.92	35.88	12.29	815.56
31	3/0AL	167.80	230.64	124	1.86	20.71	11.14	1,868.54
32	3/0AS	167.80	1,550.56	834	1.86	53.70	28.87	4,844.85
33	336AL	336.00	960.85	383	2.51	49.11	19.57	6,574.01
34	336AS	336.00	321.28	128	2.51	28.40	11.31	3,801.40
35	4AA	41.74	2,559.65	3,084	0.83	46.09	55.53	2,317.95
36	4AL	41.74	18,938.72	22,818	0.83	125.38	151.06	6,305.05
37	4AS	41.74	27,558.86	33,203	0.83	151.24	182.22	7,605.78
38	4CU	41.74	1,407,423.39	423,923	3.32	2,161.63	651.09	27,176.64
39	4CW	41.74	10,720.26	3,229	3.32	188.66	56.82	2,371.84
40	4/0AA	211.59	1,408.05	745	1.89	51.59	27.29	5,775.33
41	4/0AL	211.59	2,701.88	1,430	1.89	71.46	37.81	8,000.20
42	4/0AS	211.59	923.85	489	1.89	41.79	22.11	4,678.10
43	4/0CU	211.59	504.63	89	5.67	53.49	9.43	1,996.15
44	4ACC	41.74	6,837.73	2,060	3.32	150.67	45.38	1,894.26
45	556AL	556.00	1,089.40	260	4.19	67.56	16.12	8,965.22
46	6AL	26.25	917.15	1,105	0.83	27.59	33.24	872.62
47	6AS	26.25	654.04	788	0.83	23.30	28.07	736.90
48	6CC	26.25	51,517.14	49,064	1.05	232.58	221.50	5,814.70
49	6CU	26.25	31,286.53	29,797	1.05	181.25	172.62	4,531.37
50	6CW	26.25	11,684.86	11,128	1.05	110.77	105.49	2,769.26
51	6AAL	26.25	1,513.92	1,824	0.83	35.45	42.71	1,121.13
52	6ACC	26.25	42,869.49	40,828	1.05	212.16	202.06	5,304.27
53	8CC	16.51	533.52	260	2.05	33.07	16.13	266.33
54	8CU	16.51	869.25	285	3.05	51.49	16.88	278.70
55	8ACC	16.51	2,130.30	526	4.05	92.89	22.93	378.63
56	1/0AA	105.53	227.50	144	1.58	18.96	12.00	1,266.31
57	1/0AL	105.53	496.12	314	1.58	28.00	17.72	1,870.01
58	2AL	66.37	78.48	72	1.09	9.25	8.49	563.16
59	4CU	41.74	1,152.29	347	3.32	61.85	18.63	777.61
60	4/0AL	211.59	132.30	70	1.89	15.81	8.37	1,770.30
61	1/0AA	105.53	33,419.93	21,152	1.58	229.79	145.44	15,348.09
62	1/0AL	105.53	154,722.24	97,925	1.58	494.43	312.93	33,023.86
63	1/0AS	105.53	89,041.78	56,356	1.58	375.08	237.39	25,052.35
64	1/0CU	105.53	18,183.77	5,332	3.41	249.01	73.02	7,706.28

Kentucky Power
Zero Intercept & Minimum System Analyses

Account 365 - Overhead Conductors and Devices **SECONDARY**

#	Description	Size	Cost	Quantity	Actual Unit Cost ($ per Unit)	Linear Regression Inputs y*n^0.5	n^0.5	xn^0.5
65	1/0Unknown	105.53	379.20	240	1.58	24.48	15.49	1,634.88
66	2A5	66.37	207.10	190	1.09	15.02	13.78	914.83
67	2AA	66.37	130,226.55	119,474	1.09	376.76	345.65	22,940.44
68	2AL	66.37	54,641.92	50,130	1.09	244.05	223.90	14,859.87
69	2AS	66.37	229,953.53	210,967	1.09	500.65	459.31	30,484.01
70	2CC	66.37	601.52	206	2.92	41.91	14.35	952.57
71	2CU	66.37	73,102.02	25,035	2.92	462.02	158.22	10,501.19
72	2CW	66.37	1,457.08	499	2.92	65.23	22.34	1,482.57
73	2/0AA	133.07	996.96	536	1.86	43.06	23.15	3,080.84
74	2/0AL	133.07	2,153.88	1,158	1.86	63.29	34.03	4,528.36
75	2/0AS	133.07	2,730.47	1,468	1.86	71.26	38.31	5,098.58
76	3/0AA	167.80	180.42	97	1.86	18.32	9.85	1,652.64
77	3/0AL	167.80	18,179.12	9,774	1.86	183.88	98.86	16,589.07
78	3/0AS	167.80	4,882.13	2,625	1.86	95.29	51.23	8,596.87
79	336AL	336.00	557.51	222	2.51	37.41	14.90	5,007.60
80	336AL	336.00	2,715.96	1,082	2.51	82.57	32.89	11,052.59
81	336AS	336.00	604.91	241	2.51	38.97	15.52	5,216.12
82	336CU	336.00	404.11	161	2.51	31.85	12.69	4,263.36
83	350AL	350.00	988.94	394	2.51	49.82	19.85	6,947.29
84	4AA	41.74	4,794.49	5,776	0.83	63.08	76.00	3,172.37
85	4AL	41.74	26,503.40	31,932	0.83	148.32	178.69	7,458.72
86	4AS	41.74	17,049.98	20,542	0.83	118.96	143.33	5,982.40
87	4CU	41.74	1,259,244.71	379,291	3.32	2,044.67	615.87	25,706.23
88	4CW	41.74	3,821.31	1,151	3.32	112.64	33.93	1,416.09
89	4/0AA	211.59	2,775.49	1,469	1.89	72.43	38.32	8,108.45
90	4/0AL	211.59	16,894.78	8,939	1.89	178.69	94.55	20,005.28
91	4/0AS	211.59	922.32	488	1.89	41.75	22.09	4,674.22
92	4/0CU	211.59	8,383.32	2,525	3.32	166.83	50.25	10,632.57
93	4ACC	41.74	3,817.99	1,150	3.32	112.59	33.91	1,415.47
94	500AL	500.00	4,774.92	1,140	4.19	141.45	33.76	16,878.98
95	6CC	26.25	35,351.71	33,668	1.05	192.66	183.49	4,816.78
96	6CU	26.25	69,884.23	66,556	1.05	270.88	257.99	6,772.37
97	6CW	26.25	6,453.73	6,146	1.05	82.32	78.40	2,058.05
98	6ACC	26.25	31,304.84	29,814	1.05	181.30	172.67	4,532.70
99	750AL	750.00	2,451.79	247	9.94	156.11	15.71	11,779.03
100	8CC	16.51	1,226.65	402	3.05	61.17	20.05	331.08
101	8ACC	16.51	2,203.20	544	4.05	94.46	23.32	385.05
102	1/0AL	105.53	1,565.90	991	1.58	49.74	31.48	3,322.25
103	1/0AS	105.53	758.40	480	1.58	34.62	21.91	2,312.07
104	2AA	66.37	1,080.58	991	1.09	34.32	31.49	2,089.68
105	2AL	66.37	925.40	849	1.09	31.76	29.14	1,933.82
106	2AS	66.37	966.55	887	1.09	32.46	29.78	1,976.35
107	2CU	66.37	338.72	116	2.92	31.45	10.77	714.82
108	2/0AA	133.07	154.38	83	1.86	16.95	9.11	1,212.34
109	2/0AL	133.07	1,112.28	598	1.86	45.48	24.45	3,254.14
110	2/0AL	133.07	109.74	59	1.86	14.29	7.68	1,022.14
111	3/0AL	167.80	2,392.68	314	7.62	135.03	17.72	2,973.42
112	336AA	336.00	80.32	32	2.51	14.20	5.66	1,900.70
113	336AL	336.00	1,459.63	582	2.51	60.53	24.11	8,102.59
114	4CU	41.74	1,553.76	468	3.32	71.82	21.63	902.97
115	4/0AL	211.59	1,224.72	648	1.89	48.11	25.46	5,386.25
116	6CC	26.25	453.60	432	1.05	21.82	20.78	545.62
117	6CU	26.25	108.15	103	1.05	10.66	10.15	266.42
118	750AL	750.00	2,862.71	288	9.94	168.69	16.97	12,727.91
119	1/0AL	105.53	257.54	163	1.58	20.17	12.77	1,347.33
120	2AA	66.37	318.28	292	1.09	18.63	17.09	1,134.11
121	2AL	66.37	374.96	344	1.09	20.22	18.55	1,230.96
122	2AS	66.37	155.87	143	1.09	13.03	11.96	793.66
123	336AL	336.00	753.00	300	2.51	43.47	17.32	5,819.68
124	4CU	41.74	1,371.16	413	3.32	67.47	20.32	848.26
125	4/0AL	211.59	60.48	32	1.89	10.69	5.66	1,196.94
126	1/0AL	105.53	760.14	246	3.09	48.46	15.68	1,655.19
127	4AL	41.74	1,758.90	1,353	1.30	47.82	36.78	1,535.33
128	1/0AL	105.53	9,881.56	3,198	3.09	174.74	56.55	5,967.79

Kentucky Power
Zero Intercept & Minimum System Analyses

Account 365 - Overhead Conductors and Devices **SECONDARY**

#	Description	Size	Cost	Quantity	Actual Unit Cost ($ per Unit)	Linear Regression Inputs y*n^0.5	n^0.5	xn^0.5
129	2AL	66.37	3,983.51	2,064	1.93	87.68	45.43	3,015.22
130	2/0AL	133.07	18,608.58	4,723	3.94	270.77	68.72	9,145.24
131	336AL	336.00	93,374.65	11,672	8.00	864.29	108.04	36,300.18
132	350AL	350.00	225.77	28	8.00	42.50	5.31	1,859.34
133	4AL	41.74	716.86	491	1.46	32.35	22.16	924.90
134	4/0AL	211.59	172,701.33	30,840	5.60	983.43	175.61	37,158.06
135	6CU	26.25	4,280.39	435	9.84	205.23	20.86	547.51
136	750AL	750.00	3,787.13	381	9.94	194.02	19.52	14,639.40
137	1AL	83.69	414.06	134	3.09	35.77	11.58	968.78
138	1/0AL	105.53	4,401,714.63	1,424,503	3.09	3,687.99	1,193.53	125,953.94
139	2AL	66.37	31,782.13	17,180	1.85	242.48	131.07	8,699.03
140	2/0AL	133.07	3,279.63	901	3.64	109.26	30.02	3,994.37
141	3/0AL	167.80	5,090.15	668	7.62	196.94	25.85	4,336.90
142	336AL	336.00	88,401.90	10,754	8.22	852.45	103.70	34,844.49
143	350AL	350.00	1,931.70	235	8.22	126.01	15.33	5,365.39
144	4AL	41.74	9,553.65	6,544	1.46	118.10	80.89	3,376.45
145	4CU	41.74	2,534.39	576	4.40	105.60	24.00	1,001.76
146	4/0AL	211.59	652,155.49	446,682	1.46	975.78	668.34	141,415.95
147	4/0Unknown	211.59	765.06	311	2.46	43.38	17.64	3,731.46
148	500AL	500.00	1,676.00	400	4.19	83.80	20.00	9,999.99
149	6CU	26.25	4,398.47	447	9.84	208.04	21.14	555.01
150	1/0AL	105.53	494.40	160	3.09	39.09	12.65	1,334.87
151	2AA	66.37	231.94	159	1.46	18.40	12.60	836.52
152	2AL	66.37	27,939.90	19,137	1.46	201.97	138.34	9,181.24
153	2Unknown	66.37	258.42	177	1.46	19.42	13.30	882.98
154	2/0AL	133.07	29.20	20	1.46	6.53	4.47	595.12
155	336AL	336.00	1,088.00	136	8.00	93.30	11.66	3,918.40
156	4AA	41.74	128.70	99	1.30	12.93	9.95	415.31
157	4AL	41.74	2,576,933.40	1,982,256	1.30	1,830.30	1,407.93	58,766.84
158	4CU	41.74	14,801.57	3,364	4.40	255.20	58.00	2,420.92
159	4Unknown	41.74	4,816.75	1,095	4.40	145.58	33.09	1,381.03
160	4/0AL	211.59	35,433.95	4,650	7.62	519.62	68.19	14,428.84
161	6AL	26.25	1,110.17	1,019	1.09	34.79	31.91	837.77
162	6CC	26.25	9,653.02	981	9.84	308.20	31.32	822.20
163	6CW	26.25	738.00	75	9.84	85.22	8.66	227.34
164	1/0AL	105.53	14,710.63	4,761	3.09	213.20	69.00	7,281.43
165	2AL	66.37	50,031.91	23,712	2.11	324.91	153.99	10,219.92
166	2/0AL	133.07	100,957.13	25,624	3.94	630.69	160.07	21,301.35
167	3/0AL	167.80	408.80	73	5.60	47.85	8.54	1,433.68
168	336AL	336.00	81,263.79	10,158	8.00	806.29	100.79	33,864.36
169	350AL	350.00	698.21	87	8.00	74.74	9.34	3,269.76
170	4AL	41.74	873.08	598	1.46	35.70	24.45	1,020.71
171	4/0AA	211.59	1,198.40	214	5.60	81.92	14.63	3,095.32
172	4/0AL	211.59	109,453.29	51,874	2.11	480.57	227.76	48,191.72
173	556AL	556.00	11,731.92	2,800	4.19	221.71	52.91	29,420.65
174	750AL	750.00	467.18	47	9.94	68.15	6.86	5,141.74
175	1AL	83.69	1,832.37	593	3.09	75.25	24.35	2,037.98
176	1/0AA	105.53	927.49	300	3.09	53.53	17.33	1,828.33
177	1/0AL	105.53	8,763,912.64	2,836,218	3.09	5,203.89	1,684.11	177,725.54
178	1/0AL	105.53	417.15	135	3.09	35.90	11.62	1,226.16
179	1/0XX	105.53	398.61	129	3.09	35.10	11.36	1,198.60
180	2AA	66.37	196.10	106	1.85	19.05	10.30	683.31
181	2AL	66.37	5,819,940.61	3,145,914	1.85	3,281.29	1,773.67	117,716.86

Kentucky Power
Zero Intercept & Minimum System Analyses

Account 365 - Overhead Conductors and Devices **SECONDARY**

#	Description	Size	Cost	Quantity	Actual Unit Cost ($ per Unit)	y*n^0.5	n^0.5	xn^0.5
						Linear Regression Inputs		
182	2AL	66.37	3,093.53	1,672	1.85	75.65	40.89	2,713.98
183	2AL	66.37	342.25	185	1.85	25.16	13.60	902.72
184	2/0AL	133.07	53,525.38	14,705	3.64	441.40	121.26	16,136.74
185	2AAL	66.37	190.55	103	1.85	18.78	10.15	673.57
186	3/0AL	167.80	24,490.63	3,214	7.62	431.99	56.69	9,512.93
187	336AL	336.00	5,416.23	659	8.22	211.00	25.67	8,624.86
188	350AL	350.00	2,153.64	262	8.22	133.05	16.19	5,665.24
189	4AL	41.74	446,533.22	305,845	1.46	807.43	553.03	23,083.57
190	4CU	41.74	19,029.95	4,325	4.40	289.36	65.76	2,745.02
191	4/0AL	211.59	2,235,582.56	293,384	7.62	4,127.36	541.65	114,608.58
192	4/0AL	211.59	1,104.90	145	7.62	91.76	12.04	2,547.90
193	556AL	556.00	519.56	124	4.19	46.66	11.14	6,191.35
194	6AL	26.25	1,221.89	1,121	1.09	36.49	33.48	878.92
195	6CC	26.25	3,426.94	348	9.84	183.63	18.66	489.89
196	750AL	750.00	1,292.13	130	9.94	113.33	11.40	8,551.09
197	1/0AL	105.53	750.87	243	3.09	48.17	15.59	1,645.06
198	1/0AA	105.53	2,348.40	760	3.09	85.19	27.57	2,909.29
199	2AA	66.37	74.00	40	1.85	11.70	6.32	419.75
200	2AL	66.37	680.80	368	1.85	35.49	19.18	1,273.18
201	4AL	41.74	1,159.36	794	1.46	41.14	28.18	1,176.21
202	4CU	41.74	2,875.91	866	3.32	97.71	29.43	1,228.49
203	4/0AL	211.59	8,991.34	1,180	7.62	261.75	34.35	7,268.32
204	500AL	500.00	586.60	140	4.19	49.58	11.83	5,916.08
205	6CC	26.25	980.04	100	9.84	98.20	9.98	261.98
206	1/0AL	105.53	14,337.22	4,640	3.09	210.48	68.12	7,188.42
207	1/0Unknown	105.53	259.56	84	3.09	28.32	9.17	967.21
208	2AL	66.37	6,038.39	3,264	1.85	105.69	57.13	3,791.75
209	4AL	41.74	1,382.62	947	1.46	44.93	30.77	1,284.48
210	4/0AL	211.59	2,407.43	316	7.62	135.44	17.77	3,760.96
211	TOTAL		$ 30,669,582.89	13,127,234				
212								
213	**Zero Intercept Linear Regression Results**					**LINEST Array**		
214								
215	Size Coefficient ($ per MCM)		0.01738			0.01738	0.87122	
216	Zero Intercept ($ per Unit)		0.87122			0.00189	0.19067	
217	R-Square		0.8873			0.88732	291.44685	
218								
219	**Plant Classification**							
220								
221	Total Number of Units		13,127,234					
222	Zero Intercept ($/Unit)		$ 0.87					
223	Minimum System ($/Unit)		$ 1.46					
224	Use Min System (M) or Zero Intercept (Z)?		Z					
225	Zero Intercept or Min System Cost ($)		$ 11,436,647					
226	Total Cost of Sample		$ 30,669,583					
227	Percentage of Total		0.3729					
228	Percentage Classified as Customer-Related		37.29%					
229	Percentage Classified as Demand-Related		62.71%					

Kentucky Power
Zero Intercept & Minimum System Analyses

Account 367 - Underground Conductors and Devices **PRIMARY**

#	Description	Area from Table of Conductor Sizes Size	Cost	Quantity	Actual Unit Cost ($ per Unit)	Linear Regression Inputs y*n^0.5	n^0.5	xn^0.5
1	1/0AL	105.53	$ 8,915.71	957	9.32	288.26	30.93	3,264.00
2	1/0AL	105.53	2,077.82	223	9.32	139.16	14.93	1,575.71
3	2AL	66.37	7,234.18	931	7.77	237.09	30.51	2,025.11
4	1/0AL	105.53	18,073.02	1,939	9.32	410.42	44.04	4,647.16
5	2AL	66.37	1,554.00	200	7.77	109.88	14.14	938.60
6	4/0AL	211.59	10,840.58	856	12.66	370.46	29.26	6,191.68
7	1/0AL	105.53	792.20	85	9.32	85.93	9.22	972.95
8	1/0AL	105.53	3,165,076.29	339,600	9.32	5,431.25	582.75	61,498.45
9	1/0CU	105.53	7,782.20	835	9.32	269.31	28.90	3,049.46
10	2AL	66.37	91,308.17	11,751	7.77	842.30	108.40	7,194.65
11	2CU	66.37	17,368.51	2,235	7.77	367.36	47.28	3,137.88
12	4/0AL	211.59	95,435.00	7,538	12.66	1,099.18	86.82	18,371.15
13	500AL	500.00	7,711.20	272	28.35	467.56	16.49	8,246.21
14	500CU	500.00	7,101.06	250	28.35	448.68	15.83	7,913.25
15	750AL	750.00	138,958.12	3,624	38.34	2,308.17	60.20	45,152.02
16	1/0AL	105.53	6,710.40	720	9.32	250.08	26.83	2,831.69
17	750AL	750.00	115,089.74	3,002	38.34	2,100.60	54.79	41,091.64
18	750AL	750.00	43,785.05	1,142	38.34	1,295.65	33.79	25,345.34
19	750AL	750.00	33,739.20	880	38.34	1,137.35	29.66	22,248.60
20	1/0AL	105.53	870,516.90	93,403	9.32	2,848.37	305.62	32,252.30
21	1/0CU	105.53	30,797.57	3,304	9.32	535.75	57.48	6,066.39
22	2AL	66.37	96,172.14	12,377	7.77	864.44	111.25	7,383.79
23	2CU	66.37	8,416.41	1,083	7.77	255.73	32.91	2,184.33
24	4/0AL	211.59	240,077.72	18,963	12.66	1,743.38	137.71	29,137.90
25	500AL	500.00	4,564.69	161	28.35	359.73	12.69	6,344.52
26	750AL	750.00	214,213.34	5,587	38.34	2,865.82	74.75	56,060.69
27	750CU	750.00	11,502.00	300	38.34	664.07	17.32	12,990.38
28	1/0AL	105.53	22,396.99	1,711	13.09	541.46	41.36	4,365.21
29	1/0AL	105.53	13,404.16	1,024	13.09	418.88	32.00	3,376.99
30	1/0AL	105.53	1,679,726.58	128,321	13.09	4,689.10	358.22	37,803.28
31	2AL	66.37	1,942.50	250	7.77	122.85	15.81	1,049.39
32	4/0AL	211.59	17,761.95	970	18.32	570.44	31.14	6,588.43
33	750AL	750.00	29,381.32	629	46.68	1,171.12	25.09	18,816.18
34	750AL	750.00	111,912.39	2,397	46.68	2,285.62	48.96	36,722.73
35	750AL	750.00	4,201.20	90	46.68	442.85	9.49	7,115.12
36	1/0AL	105.53	367,404.13	28,068	13.09	2,193.02	167.53	17,680.00
37	2AL	66.37	6,450.89	830	7.77	223.88	28.81	1,912.34
38	4/0AL	211.59	1,741.98	95	18.32	178.64	9.75	2,063.28
39	750AL	750.00	47,566.92	1,019	46.68	1,490.11	31.92	23,941.33
40	TOTAL		$ 7,559,704.22	$ 677,626.64				
41								
42	**Zero Intercept Linear Regression Results**					**LINEST Array**		
43								
44	Size Coefficient ($ per MCM)		0.04578			0.04578	5.36852	
45	Zero Intercept ($ per Unit)		5.36852			0.00266	0.44292	
46	R-Square		0.9798			0.97982	237.05845	
47								
48	**Plant Classification**							
49								
50	Total Number of Units		677,627					
51	Zero Intercept ($/Unit)		$ 5.37					
52	Minimum System ($/Unit)		$ 7.77					
53	Use Min System (M) or Zero Intercept (Z)?		Z					
54	Zero Intercept or Min System Cost ($)		$ 3,637,851					
55	Total Cost of Sample		$ 7,559,704					
56	Percentage of Total		0.4812					
57	Percentage Classified as Customer-Related		48.12%					
58	Percentage Classified as Demand-Related		51.88%					

Kentucky Power
Zero Intercept & Minimum System Analyses

Account 367 - Underground Conductors and Devices **SECONDARY**

#	Description	Area from Table of Conductor Sizes Size	Cost	Quantity	Actual Unit Cost ($ per Unit)	Linear Regression Inputs y*n^0.5	n^0.5	xn^0.5
1	350AL	350.00	$ 297.07	47	6.28	43.19	6.88	2,407.22
2	1/0AL	105.53	85.84	29	2.96	15.94	5.39	568.30
3	12CU	6.53	3,203.54	1,497	2.14	82.80	38.69	252.65
4	350AL	350.00	2,128.92	339	6.28	115.63	18.41	6,444.19
5	4AL	41.74	595.00	340	1.75	32.27	18.44	769.65
6	6AL	26.25	1,633.60	1,008	1.62	51.44	31.76	833.61
7	6CC	26.25	459.00	100	4.59	45.90	10.00	262.51
8	6CU	26.25	25,956.88	5,655	4.59	345.17	75.20	1,974.08
9	350AL	350.00	4,687.59	746	6.28	171.58	27.32	9,562.32
10	4AL	41.74	325.50	186	1.75	23.87	13.64	569.26
11	4/0AL	211.59	4,367.56	1,035	4.22	135.76	32.17	6,807.10
12	500AL	500.00	1,225.00	140	8.75	103.53	11.83	5,916.08
13	350AL	350.00	35,004.11	4,042	8.66	550.58	63.58	22,251.98
14	4/0AL	211.59	1,137.57	208	5.46	78.81	14.43	3,054.17
15	500AL	500.00	967.21	48	19.96	138.94	6.96	3,480.56
16	1/0AL	105.53	68,446.58	23,124	2.96	450.11	152.07	16,047.60
17	2/0AL	133.07	3,800.64	1,284	2.96	106.07	35.83	4,768.36
18	350AL	350.00	632,003.77	100,638	6.28	1,992.23	317.23	111,031.97
19	350CU	350.00	1,897.33	302	6.28	109.16	17.38	6,083.58
20	4AL	41.74	2,954.52	1,688	1.75	71.91	41.09	1,715.05
21	4CU	41.74	795.15	155	5.13	63.87	12.45	519.66
22	4/0AL	211.59	129,523.86	30,693	4.22	739.32	175.19	37,069.60
23	4/0CU	211.59	1,133.28	269	4.22	69.16	16.39	3,467.46
24	4/0Unknown	211.59	262.57	62	4.22	33.29	7.89	1,669.03
25	500AL	500.00	38,576.74	4,409	8.75	580.99	66.40	33,199.28
26	6AL	26.25	518.40	320	1.62	28.98	17.89	469.59
27	6CU	26.25	3,249.72	708	4.59	122.13	26.61	698.49
28	8CU	16.51	3,428.28	1,602	2.14	85.65	40.02	660.77
29	TOTAL		$ 968,665.24	180,675				
30								
31	**Zero Intercept Linear Regression Results**					**LINEST Array**		
32								
33	Size Coefficient ($ per MCM)		0.01245			0.01245	1.96922	
34	Zero Intercept ($ per Unit)		1.96922			0.00108	0.32035	
35	R-Square		0.9867			0.98671	53.75085	
36								
37	**Plant Classification**							
38								
39	Total Number of Units		180,675					
40	Zero Intercept ($/Unit)		$ 1.97					
41	Minimum System ($/Unit)		$ 1.62					
42	Use Min System (M) or Zero Intercept (Z)?		Z					
43	Zero Intercept or Min System Cost ($)		$ 355,790					
44	Total Cost of Sample		$ 968,665					
45	Percentage of Total		0.3673					
46	Percentage Classified as Customer-Related		36.73%					
47	Percentage Classified as Demand-Related		63.27%					

Kentucky Power
Zero Intercept & Minimum System Analyses

Account 364 - Poles

#	Description	Size	Cost	Quantity	Actual Unit Cost ($ per Unit)	Linear Regression Inputs y*n^0.5	n^0.5	xn^0.5
1	10 Feet Wood	10	$ 569.37	1	569.37	569.37	1.00	10.00
2	14 Feet FBGL	14	35,398.08	36	983.28	5,899.68	6.00	84.00
3	15 Feet Pine	15	569.37	1	569.37	569.37	1.00	15.00
4	16 Feet Ornamental	16	1,110.78	1	1,110.78	1,110.78	1.00	16.00
5	17 Feet Alumn	17	149,955.30	135	1,110.78	12,906.10	11.62	197.52
6	17 Feet FBGL	17	441,492.72	449	983.28	20,835.33	21.19	360.22
7	17 Feet Ornamental	17	22,215.60	20	1,110.78	4,967.56	4.47	76.03
8	17 Feet Pine	17	569.37	1	569.37	569.37	1.00	17.00
9	17 Feet Steel	17	31,101.84	28	1,110.78	5,877.70	5.29	89.96
10	20 Feet Alumn	20	1,186.70	1	1,186.70	1,186.70	1.00	20.00
11	20 Feet Pine	20	3,416.22	6	569.37	1,394.67	2.45	48.99
12	20 Feet Pine	20	1,708.11	3	569.37	986.18	1.73	34.64
13	20 Feet Pine	20	1,138.74	2	569.37	805.21	1.41	28.28
14	20 Feet Pine	20	2,846.85	5	569.37	1,273.15	2.24	44.72
15	20 Feet Pine	20	7,401.81	13	569.37	2,052.89	3.61	72.11
16	20 Feet Pine	20	5,693.70	10	569.37	1,800.51	3.16	63.25
17	20 Feet Pine	20	21,066.69	37	569.37	3,463.34	6.08	121.66
18	20 Feet Pine	20	1,138.74	2	569.37	805.21	1.41	28.28
19	20 Feet Pine	20	569.37	1	569.37	569.37	1.00	20.00
20	20 Feet FBGL	20	27,093.54	29	934.26	5,031.14	5.39	107.70
21	20 Feet Steel	20	2,221.56	2	1,110.78	1,570.88	1.41	28.28
22	20 Feet Unknown	20	1,708.11	3	569.37	986.18	1.73	34.64
23	20 Feet Unknown	20	569.37	1	569.37	569.37	1.00	20.00
24	20 Feet Wood	20	2,277.48	4	569.37	1,138.74	2.00	40.00
25	24 Feet Steel	24	82,817.02	26	3,185.27	16,241.75	5.10	122.38
26	24Feet FBGL	24	3,155.34	3	1,051.78	1,821.74	1.73	41.57
27	25 Feet Aluminum	25	4,207.12	4	1,051.78	2,103.56	2.00	50.00
28	25 Feet Pine	25	3,985.59	7	569.37	1,506.41	2.65	66.14
29	25 Feet Pine	25	1,138.74	2	569.37	805.21	1.41	35.36
30	25 Feet Pine	25	2,846.85	5	569.37	1,273.15	2.24	55.90
31	25 Feet Pine	25	1,138.74	2	569.37	805.21	1.41	35.36
32	25 Feet Pine	25	9,109.92	16	569.37	2,277.48	4.00	100.00
33	25 Feet Pine	25	35,870.31	63	569.37	4,519.23	7.94	198.43
34	25 Feet Pine	25	9,109.92	16	569.37	2,277.48	4.00	100.00
35	25 Feet Pine	25	26,760.39	47	569.37	3,903.40	6.86	171.39
36	25 Feet Pine	25	1,708.11	3	569.37	986.18	1.73	43.30
37	25 Feet Unknown	25	1,708.11	3	569.37	986.18	1.73	43.30
38	25 Feet FBGL	25	32,605.18	31	1,051.78	5,856.06	5.57	139.19
39	25 Feet Steel	25	12,741.08	4	3,185.27	6,370.54	2.00	50.00
40	25 Feet Wood	25	569.37	1	569.37	569.37	1.00	25.00
41	30 Feet Alumunum	30	61,469.76	22	2,794.08	13,105.40	4.69	140.71
42	30 Feet Cedar	30	1,347.92	2	673.96	953.12	1.41	42.43
43	30 Feet Concrete	30	673.96	1	673.96	673.96	1.00	30.00
44	30 Feet Concrete	30	673.96	1	673.96	673.96	1.00	30.00
45	30 Feet Concrete	30	453.30	1	453.30	453.30	1.00	30.00
46	30 Feet Douglas Fur	30	673.96	1	673.96	673.96	1.00	30.00
47	30 Feet Douglas Fur	30	673.96	1	673.96	673.96	1.00	30.00
48	30 Feet N/A	30	12,805.24	19	673.96	2,937.72	4.36	130.77
49	30 Feet Pine	30	16,707.06	18	928.17	3,937.89	4.24	127.28
50	30 Feet Pine	30	1,751.26	2	875.63	1,238.33	1.41	42.43
51	30 Feet Pine	30	17,347.47	21	826.07	3,785.53	4.58	137.48
52	30 Feet Pine	30	24,937.92	32	779.31	4,408.44	5.66	169.71
53	30 Feet Pine	30	353,734.75	485	729.35	16,062.27	22.02	660.68
54	30 Feet Pine	30	1,042,945.55	1,405	742.31	27,824.25	37.48	1,124.50
55	30 Feet Pine	30	22,488,697.28	33,368	673.96	123,111.67	182.67	5,480.07
56	30 Feet Pine	30	1,078,433.16	1,862	579.18	24,992.14	43.15	1,294.53
57	30 Feet Pine	30	13,900.32	24	579.18	2,837.39	4.90	146.97
58	30 Feet Pine	30	1,158.36	2	579.18	819.08	1.41	42.43
59	30 Feet Pine	30	4,717.72	7	673.96	1,783.13	2.65	79.37
60	30 Feet Ponderosa Pine	30	729.35	1	729.35	729.35	1.00	30.00
61	30 Feet Ponderosa Pine	30	742.31	1	742.31	742.31	1.00	30.00
62	30 Feet Ponderosa Pine	30	3,369.80	5	673.96	1,507.02	2.24	67.08
63	30 Feet Ponderosa Pine	30	174,912.36	302	579.18	10,065.08	17.38	521.34
64	30 Feet Ponderosa Pine	30	25,483.92	44	579.18	3,841.85	6.63	199.00
65	30 Feet Steel	30	3,648.64	1	3,648.64	3,648.64	1.00	30.00
66	30 Feet Steel	30	40,135.04	11	3,648.64	12,101.17	3.32	99.50
67	30 Feet Steel	30	76,621.44	21	3,648.64	16,720.17	4.58	137.48
68	30 Feet Unknown	30	673.96	1	673.96	673.96	1.00	30.00
69	30 Feet Unknown	30	20,892.76	31	673.96	3,752.45	5.57	167.03

Kentucky Power
Zero Intercept & Minimum System Analyses

Account 364 - Poles

#	Description	Size	Cost	Quantity	Actual Unit Cost ($ per Unit)	Linear Regression Inputs y*n^0.5	n^0.5	xn^0.5
70	30 Feet Unknown	30	14,153.16	21	673.96	3,088.47	4.58	137.48
71	30 Feet Wood	30	2,337.93	3	779.31	1,349.80	1.73	51.96
72	30 Feet Wood	30	779.31	1	779.31	779.31	1.00	30.00
73	30 Feet Wood	30	779.31	1	779.31	779.31	1.00	30.00
74	30 Feet Wood	30	4,376.10	6	729.35	1,786.54	2.45	73.48
75	30 Feet Wood	30	17,073.13	23	742.31	3,559.99	4.80	143.87
76	30 Feet Wood	30	706,984.04	1,049	673.96	21,828.40	32.39	971.65
77	30 Feet Wood	30	21,429.66	37	579.18	3,523.01	6.08	182.48
78	30 Feet Wood	30	3,369.80	5	673.96	1,507.02	2.24	67.08
79	32 Feet Steel	32	76,446.60	12	6,370.55	22,068.23	3.46	110.85
80	33 Feet Pine	33	673.96	1	673.96	673.96	1.00	33.00
81	33 Feet Unknown	33	6,739.60	10	673.96	2,131.25	3.16	104.36
82	35 Feet Aluminum	35	248,002.46	107	2,317.78	23,975.30	10.34	362.04
83	35 Feet Cedar	35	2,071.77	3	690.59	1,196.14	1.73	60.62
84	35 Feet Douglas Fur	35	1,713.20	2	856.60	1,211.42	1.41	49.50
85	35 Feet Douglas Fur	35	826.61	1	826.61	826.61	1.00	35.00
86	35 Feet Fiberglass	35	5,776.10	1	5,776.10	5,776.10	1.00	35.00
87	35 Feet Pine	35	13,427.96	14	959.14	3,588.77	3.74	130.96
88	35 Feet Pine	35	15,346.24	16	959.14	3,836.56	4.00	140.00
89	35 Feet Pine	35	431,613.00	450	959.14	20,346.43	21.21	742.46
90	35 Feet Pine	35	92,313.93	97	951.69	9,373.06	9.85	344.71
91	35 Feet Pine	35	3,119,737.20	3,642	856.60	51,694.94	60.35	2,112.21
92	35 Feet Pine	35	26,492,850.50	32,050	826.61	147,983.97	179.03	6,265.88
93	35 Feet Pine	35	3,743,688.39	5,421	690.59	50,846.37	73.63	2,576.96
94	35 Feet Pine	35	667,326.20	1,028	649.15	20,813.33	32.06	1,122.19
95	35 Feet Pine	35	571.26	1	571.26	571.26	1.00	35.00
96	35 Feet Pine	35	1,381.18	2	690.59	976.64	1.41	49.50
97	35 Feet Ponderosa Pine	35	959.14	1	959.14	959.14	1.00	35.00
98	35 Feet Ponderosa Pine	35	8,566.00	10	856.60	2,708.81	3.16	110.68
99	35 Feet Ponderosa Pine	35	171,934.88	208	826.61	11,921.54	14.42	504.78
100	35 Feet Ponderosa Pine	35	2,071.77	3	690.59	1,196.14	1.73	60.62
101	35 Feet Steel	35	12,341.79	3	4,113.93	7,125.54	1.73	60.62
102	35 Feet Steel	35	4,113.93	1	4,113.93	4,113.93	1.00	35.00
103	35 Feet Steel	35	209,810.43	51	4,113.93	29,379.34	7.14	249.95
104	35 Feet Unknown	35	959.14	1	959.14	959.14	1.00	35.00
105	35 Feet Unknown	35	6,852.80	8	856.60	2,422.83	2.83	98.99
106	35 Feet Unknown	35	28,931.35	35	826.61	4,890.29	5.92	207.06
107	35 Feet Unknown	35	2,071.77	3	690.59	1,196.14	1.73	60.62
108	35 Feet Unknown	35	1,381.18	2	690.59	976.64	1.41	49.50
109	35 Feet Unknown	35	1,381.18	2	690.59	976.64	1.41	49.50
110	35 Feet Wood	35	10,550.54	11	959.14	3,181.11	3.32	116.08
111	35 Feet Wood	35	5,710.14	6	951.69	2,331.15	2.45	85.73
112	35 Feet Wood	35	99,365.60	116	856.60	9,225.86	10.77	376.96
113	35 Feet Wood	35	646,409.02	782	826.61	23,115.54	27.96	978.75
114	35 Feet Wood	35	169,194.55	245	690.59	10,809.44	15.65	547.84
115	35 Feet Wood	35	18,825.35	29	649.15	3,495.78	5.39	188.48
116	35 Feet Wood	35	610.21	1	610.21	610.21	1.00	35.00
117	35 Feet Wood	35	2,479.83	3	826.61	1,431.73	1.73	60.62
118	37 Feet Steel	37	4,113.93	1	4,113.93	4,113.93	1.00	37.00
119	40 Feet Cedar	40	4,383.28	4	1,095.82	2,191.64	2.00	80.00
120	40 Feet Cedar	40	4,466.24	4	1,116.56	2,233.12	2.00	80.00
121	40 Feet Cedar	40	2,055.38	2	1,027.69	1,453.37	1.41	56.57
122	40 Feet Concrete	40	1,998.56	1	1,998.56	1,998.56	1.00	40.00
123	40 Feet Douglas Fur	40	1,027.69	1	1,027.69	1,027.69	1.00	40.00
124	40 Feet Douglas Fur	40	952.06	1	952.06	952.06	1.00	40.00
125	40 Feet Douglas Fur	40	952.06	1	952.06	952.06	1.00	40.00
126	40 Feet Fiberglass	40	11,271.72	6	1,878.62	4,601.66	2.45	97.98
127	40 Feet Pine	40	12,054.02	11	1,095.82	3,634.42	3.32	132.66
128	40 Feet Pine	40	29,587.14	27	1,095.82	5,694.05	5.20	207.85
129	40 Feet Pine	40	3,049,325.36	2,731	1,116.56	58,350.28	52.26	2,090.36
130	40 Feet Pine	40	369,263.36	344	1,073.44	19,909.35	18.55	741.89
131	40 Feet Pine	40	31,465,812.42	30,618	1,027.69	179,825.20	174.98	6,999.20
132	40 Feet Pine	40	19,556,264.46	20,541	952.06	136,450.49	143.32	5,732.85
133	40 Feet Pine	40	689,103.80	770	894.94	24,833.58	27.75	1,109.95
134	40 Feet Pine	40	45,426.96	54	841.24	6,181.83	7.35	293.94
135	40 Feet Pine	40	1,324.54	1	1,324.54	1,324.54	1.00	40.00
136	40 Feet Pine	40	1,396.40	1	1,396.40	1,396.40	1.00	40.00
137	40 Feet Pine	40	7,193.83	7	1,027.69	2,719.01	2.65	105.83
138	40 Feet Ponderosa Pine	40	3,349.68	3	1,116.56	1,933.94	1.73	69.28

Kentucky Power
Zero Intercept & Minimum System Analyses

Account 364 - Poles

#	Description	Size	Cost	Quantity	Actual Unit Cost ($ per Unit)	Linear Regression Inputs y*n^0.5	n^0.5	xn^0.5
139	40 Feet Ponderosa Pine	40	229,174.87	223	1,027.69	15,346.68	14.93	597.33
140	40 Feet Ponderosa Pine	40	158,994.02	167	952.06	12,303.33	12.92	516.91
141	40 Feet Steel	40	2,226.92	1	2,226.92	2,226.92	1.00	40.00
142	40 Feet Steel	40	438,703.24	197	2,226.92	31,256.31	14.04	561.43
143	40 Feet Unknown	40	1,183.55	1	1,183.55	1,183.55	1.00	40.00
144	40 Feet Unknown	40	4,466.24	4	1,116.56	2,233.12	2.00	80.00
145	40 Feet Unknown	40	26,719.94	26	1,027.69	5,240.21	5.10	203.96
146	40 Feet Unknown	40	14,280.90	15	952.06	3,687.31	3.87	154.92
147	40 Feet Unknown	40	952.06	1	952.06	952.06	1.00	40.00
148	40 Feet Unknown	40	13,359.97	13	1,027.69	3,705.39	3.61	144.22
149	40 Feet Wood	40	88,208.24	79	1,116.56	9,924.20	8.89	355.53
150	40 Feet Wood	40	12,881.28	12	1,073.44	3,718.51	3.46	138.56
151	40 Feet Wood	40	718,355.31	699	1,027.69	27,170.69	26.44	1,057.54
152	40 Feet Wood	40	642,640.50	675	952.06	24,735.24	25.98	1,039.23
153	40 Feet Wood	40	-	68	-	-	8.25	329.85
154	40 Feet Wood	40	-	2	-	-	1.41	56.57
155	40 Feet Wood	40	2,055.38	2	1,027.69	1,453.37	1.41	56.57
156	45 Feet Cedar	45	2,642.88	2	1,321.44	1,868.80	1.41	63.64
157	45 Feet Cedar	45	1,160.08	1	1,160.08	1,160.08	1.00	45.00
158	45 Feet Cedar	45	1,493.96	1	1,493.96	1,493.96	1.00	45.00
159	45 Feet Concrete	45	1,998.56	1	1,998.56	1,998.56	1.00	45.00
160	45 Feet Concrete	45	3,997.12	2	1,998.56	2,826.39	1.41	63.64
161	45 Feet Pine	45	22,350.41	17	1,314.73	5,420.77	4.12	185.54
162	45 Feet Pine	45	89,401.64	68	1,314.73	10,841.54	8.25	371.08
163	45 Feet Pine	45	8,778,325.92	6,643	1,321.44	107,703.44	81.50	3,667.71
164	45 Feet Pine	45	722,099.40	660	1,094.09	28,107.68	25.69	1,156.07
165	45 Feet Pine	45	39,276,828.56	33,857	1,160.08	213,457.87	184.00	8,280.12
166	45 Feet Pine	45	3,906,859.68	3,792	1,030.29	63,444.45	61.58	2,771.06
167	45 Feet Pine	45	94,534.72	98	964.64	9,549.45	9.90	445.48
168	45 Feet Pine	45	4,533.85	5	906.77	2,027.60	2.24	100.62
169	45 Feet Pine	45	1,493.96	1	1,493.96	1,493.96	1.00	45.00
170	45 Feet Ponderosa Pine	45	33,036.00	25	1,321.44	6,607.20	5.00	225.00
171	45 Feet Ponderosa Pine	45	1,094.09	1	1,094.09	1,094.09	1.00	45.00
172	45 Feet Ponderosa Pine	45	232,016.00	200	1,160.08	16,406.01	14.14	636.40
173	45 Feet Ponderosa Pine	45	11,333.19	11	1,030.29	3,417.09	3.32	149.25
174	45 Feet Steel	45	28,174.26	6	4,695.71	11,502.09	2.45	110.23
175	45 Feet Unknown	45	54,350.79	39	1,393.61	8,703.09	6.24	281.02
176	45 Feet Unknown	45	13,147.30	10	1,314.73	4,157.54	3.16	142.30
177	45 Feet Unknown	45	2,642.88	2	1,321.44	1,868.80	1.41	63.64
178	45 Feet Unknown	45	44,857.69	41	1,094.09	7,005.59	6.40	288.14
179	45 Feet Unknown	45	10,440.72	9	1,160.08	3,480.24	3.00	135.00
180	45 Feet Unknown	45	6,181.74	6	1,030.29	2,523.68	2.45	110.23
181	45 Feet Wood	45	3,944.19	3	1,314.73	2,277.18	1.73	77.94
182	45 Feet Wood	45	199,838.96	152	1,314.73	16,209.08	12.33	554.80
183	45 Feet Wood	45	9,250.08	7	1,321.44	3,496.20	2.65	119.06
184	45 Feet Wood	45	653,171.73	597	1,094.09	26,732.54	24.43	1,099.51
185	45 Feet Wood	45	203,014.00	175	1,160.08	15,346.42	13.23	595.29
186	45 Feet Wood	45	1,030.29	1	1,030.29	1,030.29	1.00	45.00
187	45 Feet Wood	45	964.64	1	964.64	964.64	1.00	45.00
188	45 Feet Wood	45	6,960.48	6	1,160.08	2,841.60	2.45	110.23
189	50 Feet Cedar	50	1,507.52	1	1,507.52	1,507.52	1.00	50.00
190	50 Feet Cedar	50	17,178.72	13	1,321.44	4,764.52	3.61	180.28
191	50 Feet Cedar	50	2,188.18	2	1,094.09	1,547.28	1.41	70.71
192	50 Feet Cedar	50	6,960.48	6	1,160.08	2,841.60	2.45	122.47
193	50 Feet Douglas Fur	50	5,656.32	4	1,414.08	2,828.16	2.00	100.00
194	50 Feet Douglas Fur	50	1,084.55	1	1,084.55	1,084.55	1.00	50.00
195	50 Feet Pine	50	179,394.88	119	1,507.52	16,445.10	10.91	545.44
196	50 Feet Pine	50	12,923,277.12	9,139	1,414.08	135,183.39	95.60	4,779.91
197	50 Feet Pine	50	2,249,786.16	1,578	1,425.72	56,635.37	39.72	1,986.20
198	50 Feet Pine	50	4,332,241.29	3,341	1,296.69	74,950.48	57.80	2,890.07
199	50 Feet Pine	50	45,633.51	39	1,170.09	7,307.21	6.24	312.25
200	50 Feet Pine	50	2,169.10	2	1,084.55	1,533.79	1.41	70.71
201	50 Feet Pine	50	2,038.94	2	1,019.47	1,441.75	1.41	70.71
202	50 Feet Pine	50	3,412.64	2	1,706.32	2,413.10	1.41	70.71
203	50 Feet Pine	50	1,614.02	1	1,614.02	1,614.02	1.00	50.00
204	50 Feet Pine	50	1,296.69	1	1,296.69	1,296.69	1.00	50.00
205	50 Feet Ponderosa Pine	50	55,149.12	39	1,414.08	8,830.93	6.24	312.25
206	50 Feet Ponderosa Pine	50	7,128.60	5	1,425.72	3,188.01	2.24	111.80
207	50 Feet Ponderosa Pine	50	28,527.18	22	1,296.69	6,082.02	4.69	234.52

Kentucky Power
Zero Intercept & Minimum System Analyses

Account 364 - Poles

#	Description	Size	Cost	Quantity	Actual Unit Cost ($ per Unit)	Linear Regression Inputs y*n^0.5	n^0.5	xn^0.5
208	50 Feet Ponderosa Pine	50	1,170.09	1	1,170.09	1,170.09	1.00	50.00
209	50 Feet Ponderosa Pine	50	1,019.47	1	1,019.47	1,019.47	1.00	50.00
210	50 Feet Steel	50	23,234.85	5	4,646.97	10,390.94	2.24	111.80
211	50 Feet Unknown	50	31,109.76	22	1,414.08	6,632.62	4.69	234.52
212	50 Feet Unknown	50	1,296.69	1	1,296.69	1,296.69	1.00	50.00
213	50 Feet Wood	50	1,597.97	1	1,597.97	1,597.97	1.00	50.00
214	50 Feet Wood	50	7,537.60	5	1,507.52	3,370.92	2.24	111.80
215	50 Feet Wood	50	270,089.28	191	1,414.08	19,542.97	13.82	691.01
216	50 Feet Wood	50	9,980.04	7	1,425.72	3,772.10	2.65	132.29
217	50 Feet Wood	50	125,778.93	97	1,296.69	12,770.92	9.85	492.44
218	50 Feet Wood	50	1,170.09	1	1,170.09	1,170.09	1.00	50.00
219	50 Feet Wood	50	2,169.10	2	1,084.55	1,533.79	1.41	70.71
220	50 Feet Wood	50	1,296.69	1	1,296.69	1,296.69	1.00	50.00
221	55 Feet Cedar	55	4,522.56	3	1,507.52	2,611.10	1.73	95.26
222	55 Feet Cedar	55	12,726.72	9	1,414.08	4,242.24	3.00	165.00
223	55 Feet Cedar	55	5,702.88	4	1,425.72	2,851.44	2.00	110.00
224	55 Feet Concrete	55	2,238.39	1	2,238.39	2,238.39	1.00	55.00
225	55 Feet Douglas Fur	55	1,840.85	1	1,840.85	1,840.85	1.00	55.00
226	55 Feet Pine	55	1,951.30	1	1,951.30	1,951.30	1.00	55.00
227	55 Feet Pine	55	150,949.70	82	1,840.85	16,669.61	9.06	498.05
228	55 Feet Pine	55	7,345,659.50	4,450	1,650.71	110,116.09	66.71	3,668.96
229	55 Feet Pine	55	328,608.54	234	1,404.31	21,481.81	15.30	841.34
230	55 Feet Pine	55	400,413.79	287	1,395.17	23,635.68	16.94	931.76
231	55 Feet Pine	55	24,626.47	19	1,296.13	5,649.70	4.36	239.74
232	55 Feet Pine	55	3,655.08	3	1,218.36	2,110.26	1.73	95.26
233	55 Feet Pine	55	11,674.38	6	1,945.73	4,766.05	2.45	134.72
234	55 Feet Pine	55	2,161.76	1	2,161.76	2,161.76	1.00	55.00
235	55 Feet Pine	55	1,650.71	1	1,650.71	1,650.71	1.00	55.00
236	55 Feet Pine	55	1,650.71	1	1,650.71	1,650.71	1.00	55.00
237	55 Feet Ponderosa Pine	55	46,219.88	28	1,650.71	8,734.74	5.29	291.03
238	55 Feet Ponderosa Pine	55	2,808.62	2	1,404.31	1,985.99	1.41	77.78
239	55 Feet Ponderosa Pine	55	1,395.17	1	1,395.17	1,395.17	1.00	55.00
240	55 Feet Ponderosa Pine	55	1,170.09	1	1,170.09	1,170.09	1.00	55.00
241	55 Feet Steel	55	7,109.07	3	2,369.69	4,104.42	1.73	95.26
242	55 Feet Steel	55	2,369.69	1	2,369.69	2,369.69	1.00	55.00
243	55 Feet Unknown	55	11,554.97	7	1,650.71	4,367.37	2.65	145.52
244	55 Feet Wood	55	7,363.40	4	1,840.85	3,681.70	2.00	110.00
245	55 Feet Wood	55	170,023.13	103	1,650.71	16,752.88	10.15	558.19
246	55 Feet Wood	55	5,617.24	4	1,404.31	2,808.62	2.00	110.00
247	55 Feet Wood	55	26,508.23	19	1,395.17	6,081.41	4.36	239.74
248	60 Feet Cedar	60	2,093.67	1	2,093.67	2,093.67	1.00	60.00
249	60 Feet Cedar	60	97,426.19	53	1,838.23	13,382.52	7.28	436.81
250	60 Feet Cedar	60	4,885.44	3	1,628.48	2,820.61	1.73	103.92
251	60 Feet Cedar	60	1,530.77	1	1,530.77	1,530.77	1.00	60.00
252	60 Feet Douglas Fur	60	11,554.97	7	1,650.71	4,367.37	2.65	158.75
253	60 Feet Douglas Fur	60	1,530.77	1	1,530.77	1,530.77	1.00	60.00
254	60 Feet Pine	60	93,883.35	51	1,840.85	13,146.30	7.14	428.49
255	60 Feet Pine	60	1,373,390.72	832	1,650.71	47,613.76	28.84	1,730.66
256	60 Feet Pine	60	44,937.92	32	1,404.31	7,943.98	5.66	339.41
257	60 Feet Pine	60	11,161.36	8	1,395.17	3,946.14	2.83	169.71
258	60 Feet Pine	60	1,395.17	1	1,395.17	1,395.17	1.00	60.00
259	60 Feet Pine	60	4,185.51	3	1,395.17	2,416.51	1.73	103.92
260	60 Feet Pine	60	4,995.22	2	2,497.61	3,532.15	1.41	84.85

Kentucky Power
Zero Intercept & Minimum System Analyses

Account 364 - Poles

#	Description	Size	Cost	Quantity	Actual Unit Cost ($ per Unit)	Linear Regression Inputs y*n^0.5	n^0.5	xn^0.5
261	60 Feet Pine	60	2,771.88	1	2,771.88	2,771.88	1.00	60.00
262	60 Feet Ponderosa Pine	60	8,253.55	5	1,650.71	3,691.10	2.24	134.16
263	60 Feet Steel	60	2,526.74	1	2,526.74	2,526.74	1.00	60.00
264	60 Feet Unknown	60	3,301.42	2	1,650.71	2,334.46	1.41	84.85
265	60 Feet Wood	60	1,951.30	1	1,951.30	1,951.30	1.00	60.00
266	60 Feet Wood	60	1,840.85	1	1,840.85	1,840.85	1.00	60.00
267	60 Feet Wood	60	478,705.90	290	1,650.71	28,110.58	17.03	1,021.76
268	60 Feet Wood	60	47,746.54	34	1,404.31	8,188.46	5.83	349.86
269	60 Feet Wood	60	9,766.19	7	1,395.17	3,691.27	2.65	158.75
270	60 Feet Wood	60	2,790.34	2	1,395.17	1,973.07	1.41	84.85
271	60 Feet Wood	60	1,395.17	1	1,395.17	1,395.17	1.00	60.00
272	60 Feet Wood	60	2,432.53	1	2,432.53	2,432.53	1.00	60.00
273	65 Feet Cedar	65	4,630.46	2	2,315.23	3,274.23	1.41	91.92
274	65 Feet Cedar	65	44,882.88	24	1,870.12	9,161.68	4.90	318.43
275	65 Feet Cedar	65	1,870.12	1	1,870.12	1,870.12	1.00	65.00
276	65 Feet Pine	65	46,218.07	19	2,432.53	10,603.15	4.36	283.33
277	65 Feet Pine	65	625,112.10	270	2,315.23	38,043.11	16.43	1,068.06
278	65 Feet Pine	65	5,610.36	3	1,870.12	3,239.14	1.73	112.58
279	65 Feet Pine	65	7,031.64	4	1,757.91	3,515.82	2.00	130.00
280	65 Feet Pine	65	5,312.16	2	2,656.08	3,756.26	1.41	91.92
281	65 Feet Pine	65	3,915.50	1	3,915.50	3,915.50	1.00	65.00
282	65 Feet Ponderosa Pine	65	2,315.23	1	2,315.23	2,315.23	1.00	65.00
283	65 Feet Steel	65	15,160.44	6	2,526.74	6,189.22	2.45	159.22
284	65 Feet Wood	65	9,730.12	4	2,432.53	4,865.06	2.00	130.00
285	65 Feet Wood	65	456,100.31	197	2,315.23	32,495.80	14.04	912.32
286	65 Feet Wood	65	56,103.60	30	1,870.12	10,243.07	5.48	356.02
287	65 Feet Wood	65	5,273.73	3	1,757.91	3,044.79	1.73	112.58
288	65 Feet Wood	65	1,395.17	1	1,395.17	1,395.17	1.00	65.00
289	65 Feet Wood	65	4,630.46	2	2,315.23	3,274.23	1.41	91.92
290	70 Feet Cedar	70	14,839.68	7	2,119.95	5,608.87	2.65	185.20
291	70 Feet Cedar	70	3,108.37	2	1,554.19	2,197.95	1.41	98.99
292	70 Feet Cedar	70	3,351.27	1	3,351.27	3,351.27	1.00	70.00
293	70 Feet Pine	70	11,719.76	4	2,929.94	5,859.88	2.00	140.00
294	70 Feet Pine	70	145,923.52	64	2,280.06	18,240.44	8.00	560.00
295	70 Feet Pine	70	12,433.48	4	3,108.37	6,216.74	2.00	140.00
296	70 Feet Pine	70	2,921.87	1	2,921.87	2,921.87	1.00	70.00
297	70 Feet Wood	70	5,859.88	2	2,929.94	4,143.56	1.41	98.99
298	70 Feet Wood	70	143,450.24	101	1,420.30	14,273.83	10.05	703.49
299	70 Feet Wood	70	2,921.87	1	2,921.87	2,921.87	1.00	70.00
300	75 Feet Cedar	75	7,528.02	2	3,764.01	5,323.11	1.41	106.07
301	75 Feet Pine	75	10,477.04	2	5,238.52	7,408.39	1.41	106.07
302	75 Feet Pine	75	86,572.23	23	3,764.01	18,051.56	4.80	359.69
303	75 Feet Unknown	75	3,764.01	1	3,764.01	3,764.01	1.00	75.00
304	75 Feet Wood	75	10,477.04	2	5,238.52	7,408.39	1.41	106.07
305	75 Feet Wood	75	158,088.42	42	3,764.01	24,393.57	6.48	486.06
306	75 Feet Wood	75	3,312.33	1	3,312.33	3,312.33	1.00	75.00
307	75 Feet Wood	75	7,528.02	2	3,764.01	5,323.11	1.41	106.07
308	80 Feet Cedar	80	3,771.74	1	3,771.74	3,771.74	1.00	80.00
309	80 Feet Douglas Fur	80	3,771.74	1	3,771.74	3,771.74	1.00	80.00
310	80 Feet Pine	80	7,543.48	6	1,257.25	3,079.61	2.45	195.96
311	80 Feet Pine	80	3,319.13	1	3,319.13	3,319.13	1.00	80.00

Kentucky Power
Zero Intercept & Minimum System Analyses

Account 364 - Poles

#	Description	Size	Cost	Quantity	Actual Unit Cost ($ per Unit)	y*n^0.5	n^0.5	xn^0.5
312	85 Feet Cedar	85	8,512.34	1	8,512.34	8,512.34	1.00	85.00
313	85 Feet Pine	85	72,274.59	9	8,030.51	24,091.53	3.00	255.00
314	TOTAL		$ 208,768,892.28	210,115				
315								
316	**Zero Intercept Linear Regression Results**					**LINEST Array**		
317								
318	Size Coefficient ($ per MCM)		35.01859			35.01859	(386.51047)	
319	Zero Intercept ($ per Unit)		(386.51047)			1.14938	46.01274	
320	R-Square		0.9810			0.98099	3,703.78655	
321								
322	**Plant Classification**							
323								
324	Total Number of Units		210,115					
325	Zero Intercept ($/Unit)		$ (386.51)					
326	Minimum System ($/Unit)		$ -					
327	Use Min System (M) or Zero Intercept (Z)?		Z					
328	Zero Intercept or Min System Cost ($)		$ (81,211,648)					
329	Total Cost of Sample		$ 208,768,892					
330	Percentage of Total		-0.3890					
331	Percentage Classified as Customer-Related		-38.90%					
332	Percentage Classified as Demand-Related		138.90%					

Kentucky Power
Zero Intercept & Minimum System Analyses

Account 368 - Transformers

#	Description	Size	Cost	Quantity	Actual Unit Cost ($ per Unit)	Linear Regression Inputs y*n^0.5	n^0.5	xn^0.5
1	34500GRDY/19920V	100	$ 119,722.60	20	5,986.13	26,770.79	4.47	447.21
2	12470GRDY/7200V	100	737,701.52	164	4,498.18	57,604.81	12.81	1,280.62
3	12470GRDY/7200V	1000	245,405.36	8	30,675.67	86,763.90	2.83	2,828.43
4	12470GRDY/7200V	1000	604,088.47	19	31,794.13	138,587.40	4.36	4,358.90
5	34500GRDY/19920V	1000	31,794.13	1	31,794.13	31,794.13	1.00	1,000.00
6	34500GRDY/19920V	1000	349,735.43	11	31,794.13	105,449.20	3.32	3,316.62
7	12470GRDY/7200V	112.5	109,569.33	13	8,428.41	30,389.06	3.61	405.62
8	12470GRDY/7200V	112.5	127,176.52	4	31,794.13	63,588.26	2.00	225.00
9	34500GRDY/19920V	112.5	165,726.84	12	13,810.57	47,841.22	3.46	389.71
10	34500GRDY/19920V	112.5	68,408.45	5	13,681.69	30,593.19	2.24	251.56
11	12470GRDY/7200V	150	463,137.75	45	10,291.95	69,040.50	6.71	1,006.23
12	12470GRDY/7200V	150	101,004.40	10	10,100.44	31,940.40	3.16	474.34
13	34500GRDY/19920V	150	158,207.17	11	14,382.47	47,701.26	3.32	497.49
14	34500GRDY/19920V	150	56,918.76	4	14,229.69	28,459.38	2.00	300.00
15	12470GRDY/7200V	1500	697,040.48	16	43,565.03	174,260.12	4.00	6,000.00
16	34500GRDY/19920V	1500	76,912.30	2	38,456.15	54,385.21	1.41	2,121.32
17	3450GRDY/19920V	1500	230,736.90	6	38,456.15	94,197.94	2.45	3,674.23
18	3450GRDY/19920V	167	171,687.56	22	7,803.98	36,603.91	4.69	783.30
19	12470GRDY/7200V	167	456,761.76	78	5,855.92	51,718.09	8.83	1,474.90
20	12470GRDY/7200V	225	133,681.10	10	13,368.11	42,273.68	3.16	711.51
21	12470GRDY/7200V	225	49,262.40	3	16,420.80	28,441.66	1.73	389.71
22	34500GRDY/19920V	225	114,945.60	7	16,420.80	43,445.35	2.65	595.29
23	34500GRDY/19920V	225	32,841.60	2	16,420.80	23,222.52	1.41	318.20
24	34500GRDY/19920V	25	107,131.24	46	2,328.94	15,795.64	6.78	169.56
25	12470GRDY/7200V	25	442,122.99	177	2,497.87	33,232.00	13.30	332.60
26	12470GRDY/7200V	250	9,207.05	1	9,207.05	9,207.05	1.00	250.00
27	12470GRDY/7200V	2500	50,379.62	1	50,379.62	50,379.62	1.00	2,500.00
28	34500GRDY/19920V	2500	52,925.22	1	52,925.22	52,925.22	1.00	2,500.00
29	12470GRDY/7200V	300	807,494.75	53	15,235.75	110,917.93	7.28	2,184.03
30	12470GRDY/7200V	300	227,869.92	16	14,241.87	56,967.48	4.00	1,200.00
31	34500GRDY/19920V	300	314,492.96	16	19,655.81	78,623.24	4.00	1,200.00
32	34500GRDY/19920V	300	130,501.91	7	18,643.13	49,325.09	2.65	793.73
33	34500GRDY/19920V	50	427,638.90	94	4,549.35	44,107.58	9.70	484.77
34	12470GRDY/7200V	50	1,337,197.50	450	2,971.55	63,036.09	21.21	1,060.66
35	12470GRDY/7200V	500	1,084,893.15	55	19,725.33	146,286.96	7.42	3,708.10
36	12470GRDY/7200V	500	1,017,430.80	60	16,957.18	131,349.75	7.75	3,872.98
37	12470GRDY/7200V	500	50,871.54	3	16,957.18	29,370.70	1.73	866.03
38	34500GRDY/19920V	500	372,411.01	17	21,906.53	90,322.94	4.12	2,061.55
39	34500GRDY/19920V	500	21,255.21	1	21,255.21	21,255.21	1.00	500.00
40	3450GRDY/19920V	500	552,635.46	26	21,255.21	108,380.73	5.10	2,549.51
41	3450GRDY/19920V	75	208,375.20	40	5,209.38	32,947.01	6.32	474.34
42	12470GRDY/7200V	75	396,551.30	106	3,741.05	38,516.47	10.30	772.17
43	12470GRDY/7200V	750	448,073.25	17	26,357.25	108,673.73	4.12	3,092.33
44	12470GRDY/7200V	750	990,591.42	39	25,399.78	158,621.58	6.24	4,683.75
45	34500GRDY/19920V	750	30,892.76	1	30,892.76	30,892.76	1.00	750.00
46	34500GRDY/19920V	750	61,785.52	2	30,892.76	43,688.96	1.41	1,060.66
47	34500GRDY/19920V	750	116,347.32	4	29,086.83	58,173.66	2.00	1,500.00
48	3450GRDY/19920V	750	261,781.47	9	29,086.83	87,260.49	3.00	2,250.00
49	12470GRDY/7200V	100	44,981.80	10	4,498.18	14,224.49	3.16	316.23
50	12470GRDY/7200V	1000	30,675.67	1	30,675.67	30,675.67	1.00	1,000.00
51	12470GRDY/7200V	1000	31,794.13	1	31,794.13	31,794.13	1.00	1,000.00
52	12470GRDY/7200V	150	51,459.75	5	10,291.95	23,013.50	2.24	335.41
53	12470GRDY/7200V	150	10,291.95	1	10,291.95	10,291.95	1.00	150.00
54	34500GRDY/19920V	150	10,100.44	1	10,100.44	10,100.44	1.00	150.00
55	12470GRDY/7200V	150	10,291.95	1	10,291.95	10,291.95	1.00	150.00
56	12470GRDY/7200V	300	45,707.25	3	15,235.75	26,389.09	1.73	519.62
57	12470GRDY/7200V	300	28,483.74	2	14,241.87	20,141.05	1.41	424.26
58	12470GRDY/7200V	300	76,178.75	5	15,235.75	34,068.17	2.24	670.82
59	34500GRDY/19920V	300	39,311.62	2	19,655.81	27,797.51	1.41	424.26
60	12470GRDY/7200V	500	78,901.32	4	19,725.33	39,450.66	2.00	1,000.00
61	12470GRDY/7200V	500	101,743.08	6	16,957.18	41,536.44	2.45	1,224.74
62	12470GRDY/7200V	500	16,957.18	1	16,957.18	16,957.18	1.00	500.00
63	12470GRDY/7200V	500	19,725.33	1	19,725.33	19,725.33	1.00	500.00
64	34500GRDY/19920V	500	65,719.59	3	21,906.53	37,943.22	1.73	866.03
65	34500GRDY/19920V	500	42,510.42	2	21,255.21	30,059.41	1.41	707.11
66	12470GRDY/7200V	75	7,482.10	2	3,741.05	5,290.64	1.41	106.07
67	12470GRDY/7200V	75	74,821.00	20	3,741.05	16,730.48	4.47	335.41
68	12470GRDY/7200V	750	52,714.50	2	26,357.25	37,274.78	1.41	1,060.66
69	12470GRDY/7200V	750	25,399.78	1	25,399.78	25,399.78	1.00	750.00
70	12470GRDY/7200V	750	50,799.56	2	25,399.78	35,920.71	1.41	1,060.66
71	12470GRDY/7200V	750	25,399.78	1	25,399.78	25,399.78	1.00	750.00
72	34500GRDY/19920V	112.5	13,810.57	1	13,810.57	13,810.57	1.00	112.50
73	12470GRDY/7200V	50	13,648.05	3	4,549.35	7,879.71	1.73	86.60
74	34500GRDY/19920V	5000	243,802.32	3	81,267.44	140,759.34	1.73	8,660.25
75	12470GRDY/7200V	75	3,741.05	1	3,741.05	3,741.05	1.00	75.00
76	12470GRDY/7200V	75	7,482.10	2	3,741.05	5,290.64	1.41	106.07
77	12470GRDY/7200V	1.5	1,371.72	2	685.86	969.95	1.41	2.12
78	1247GRDY/7200V	1.5	8,242.32	12	686.86	2,379.35	3.46	5.20
79	1247GRDY/7200V	1.5	1,373.72	2	686.86	971.37	1.41	2.12

Kentucky Power
Zero Intercept & Minimum System Analyses

Account 368 - Transformers

#	Description	Size	Cost	Quantity	Actual Unit Cost ($ per Unit)	Linear Regression Inputs y*n^0.5	n^0.5	xn^0.5
80	34500GRDY/19920V	1.5	1,167.96	1	1,167.96	1,167.96	1.00	1.50
81	34500GRDY/19920V	1.5	8,175.72	7	1,167.96	3,090.13	2.65	3.97
82	12470GRDY/7200V	1.5	686.86	1	686.86	686.86	1.00	1.50
83	12470GRDY/7200V	10	8,512,197.37	5,699	1,493.63	112,756.70	75.49	754.92
84	12470GRDY/7200V	10	47,796.16	32	1,493.63	8,449.25	5.66	56.57
85	1247GRDY/7200V	10	2,987.26	2	1,493.63	2,112.31	1.41	14.14
86	34500GRDY/19920V	10	14,126.50	10	1,412.65	4,467.19	3.16	31.62
87	34500GRDY/19920V	10	2,825.30	2	1,412.65	1,997.79	1.41	14.14
88	34500GRDY/19920V	10	4,237.95	3	1,412.65	2,446.78	1.73	17.32
89	34500GRDY/19920V	10	22,602.40	16	1,412.65	5,650.60	4.00	40.00
90	1247GRDY/7200V	10	4,480.89	3	1,493.63	2,587.04	1.73	17.32
91	34500GRDY/19920V	10	2,746,191.60	1,944	1,412.65	62,284.89	44.09	440.91
92	34500GRDY/19920V	10	24,377.58	18	1,354.31	5,745.85	4.24	42.43
93	1247GRDY/7200V	10	2,987.26	2	1,493.63	2,112.31	1.41	14.14
94	1247GRDY/7200V	10	2,195,636.10	1,470	1,493.63	57,266.64	38.34	383.41
95	1247GRDY/7200V	10	8,961.78	6	1,493.63	3,658.63	2.45	24.49
96	1247GRDY/7200V	100	3,486.42	1	3,486.42	3,486.42	1.00	100.00
97	12470GRDY/7200V	100	10,459.26	3	3,486.42	6,038.66	1.73	173.21
98	12470GRDY/7200V	100	622,755.00	210	2,965.50	42,974.18	14.49	1,449.14
99	1247GRDY/7200V	100	128,997.54	37	3,486.42	21,207.06	6.08	608.28
100	34500GRDY/19920V	100	485,007.40	124	3,911.35	43,554.95	11.14	1,113.55
101	34500GRDY/19920V	100	45,201.52	14	3,228.68	12,080.61	3.74	374.17
102	34500GRDY/19920V	100	9,978.66	2	4,989.33	7,055.98	1.41	141.42
103	12470GRDY/7200V	100	3,486.42	1	3,486.42	3,486.42	1.00	100.00
104	12470GRDY/7200V	100	45,323.46	13	3,486.42	12,570.47	3.61	360.56
105	34500GRDY/19920V	100	829,206.20	212	3,911.35	56,950.12	14.56	1,456.02
106	34500GRDY/19920V	100	370,687.50	125	2,965.50	33,155.30	11.18	1,118.03
107	34500GRDY/19920V	100	2,030.53	1	2,030.53	2,030.53	1.00	100.00
108	12470GRDY/7200V	100	6,972.84	2	3,486.42	4,930.54	1.41	141.42
109	12470GRDY/7200V	100	3,817,629.90	1,095	3,486.42	115,368.37	33.09	3,309.08
110	12470GRDY/7200V	100	119,461.16	37	3,228.68	19,639.29	6.08	608.28
111	12470GRDY/7200V	100	29,655.00	10	2,965.50	9,377.73	3.16	316.23
112	12470GRDY/7200V	15	2,464.82	2	1,232.41	1,742.89	1.41	21.21
113	12470GRDY/7200V	15	19,660,636.73	15,953	1,232.41	155,659.77	126.31	1,894.58
114	12470GRDY/7200V	15	189,523.18	154	1,230.67	15,272.21	12.41	186.15
115	34500GRDY/19920V	15	114,019.20	64	1,781.55	14,252.40	8.00	120.00
116	34500GRDY/19920V	15	2,147.48	2	1,073.74	1,518.50	1.41	21.21
117	12470GRDY/7200V	15	16,021.33	13	1,232.41	4,443.52	3.61	54.08
118	34500GRDY/19920V	15	7,435,290.14	4,978	1,493.63	105,382.98	70.55	1,058.32
119	34500GRDY/19920V	15	68,787.02	46	1,495.37	10,142.09	6.78	101.73
120	34500GRDY/19920V	15	7,468.15	5	1,493.63	3,339.86	2.24	33.54
121	12470GRDY/7200V	15	13,556.51	11	1,232.41	4,087.44	3.32	49.75
122	12470GRDY/7200V	15	3,082,212.51	2,301	1,339.51	64,254.61	47.97	719.53
123	12470GRDY/7200V	15	41,125.80	30	1,370.86	7,508.51	5.48	82.16
124	12470GRDY/7200V	167	715,531.52	128	5,590.09	63,244.65	11.31	1,889.39
125	34500GRDY/19920V	167	264,409.20	45	5,875.76	39,415.80	6.71	1,120.27
126	34500GRDY/19920V	167	89,807.94	18	4,989.33	21,167.93	4.24	708.52
127	12470GRDY/7200V	167	13,776.95	5	2,755.39	6,161.24	2.24	373.42
128	34500GRDY/19920V	167	240,906.16	41	5,875.76	37,623.22	6.40	1,069.32
129	34500GRDY/19920V	167	305,730.17	61	5,011.97	39,144.74	7.81	1,304.31
130	34500GRDY/19920V	167	468,997.02	94	4,989.33	48,373.35	9.70	1,619.13
131	12470GRDY/7200V	167	537,301.05	195	2,755.39	38,476.93	13.96	2,332.03
132	12470GRDY/7200V	167	120,964.20	28	4,320.15	22,860.09	5.29	883.68
133	12470GRDY/7200V	167	41,925.60	15	2,795.04	10,825.14	3.87	646.79
134	12470GRDY/7200V	167	17,280.58	2	8,640.29	12,219.22	1.41	236.17
135	12470GRDY/7200V	167	2,755.39	1	2,755.39	2,755.39	1.00	167.00
136	12470GRDY/7200V	25	7,381.10	5	1,476.22	3,300.93	2.24	55.90
137	12470GRDY/7200V	25	41,343,017.32	28,006	1,476.22	247,045.32	167.35	4,183.75
138	12470GRDY/7200V	25	587,389.44	409	1,436.16	29,044.54	20.22	505.59
139	1247GRDY/ 7200V	25	2,952.44	2	1,476.22	2,087.69	1.41	35.36
140	1247GRDY/ 7200V	25	1,476.22	1	1,476.22	1,476.22	1.00	25.00
141	34500GRDY/19920V	25	364,029.84	204	1,784.46	25,487.19	14.28	357.07
142	34500GRDY/19920V	25	1,928.57	1	1,928.57	1,928.57	1.00	25.00
143	34500GRDY/19920V	25	5,353.38	3	1,784.46	3,090.78	1.73	43.30
144	34500GRDY/19920V	25	25,071.41	13	1,928.57	6,953.56	3.61	90.14
145	12470GRDY/ 7200V	25	41,334.16	28	1,476.22	7,811.42	5.29	132.29
146	12470GRDY/ 7200V	25	1,476.22	1	1,476.22	1,476.22	1.00	25.00
147	34500GRDY/19920V	25	1,784.46	1	1,784.46	1,784.46	1.00	25.00
148	34500GRDY/19920V	25	16,033,373.10	8,985	1,784.46	169,147.61	94.79	2,369.73
149	34500GRDY/19920V	25	448,932.90	258	1,740.05	27,949.34	16.06	401.56
150	34500GRDY/19920V	25	44,611.50	25	1,784.46	8,922.30	5.00	125.00
151	12470GRDY/ 7200V	25	41,334.16	28	1,476.22	7,811.42	5.29	132.29
152	12470GRDY/ 7200V	25	1,551.97	1	1,551.97	1,551.97	1.00	25.00
153	12470GRDY/ 7200V	25	5,208,295.95	3,315	1,571.13	90,459.44	57.58	1,439.40
154	12470GRDY/ 7200V	25	158,300.94	102	1,551.97	15,674.13	10.10	252.49
155	12470GRDY/ 7200V	25	28,723.10	10	2,872.31	9,083.04	3.16	79.06
156	12470GRDY/ 7200V	25	140,746.74	86	1,636.59	15,177.11	9.27	231.84
157	12470GRDY/ 7200V	25	1,551.97	1	1,551.97	1,551.97	1.00	25.00
158	12470GRDY/7200V	250	49,004.85	15	3,266.99	12,653.00	3.87	968.25

Kentucky Power
Zero Intercept & Minimum System Analyses

Account 368 - Transformers

#	Description	Size	Cost	Quantity	Actual Unit Cost ($ per Unit)	Linear Regression Inputs y*n^0.5	n^0.5	xn^0.5
159	34500GRDY/19920V	250	7,298.93	1	7,298.93	7,298.93	1.00	250.00
160	34500GRDY/19920V	250	14,597.86	2	7,298.93	10,322.25	1.41	353.55
161	34500GRDY/19920V	250	37,233.06	6	6,205.51	15,200.33	2.45	612.37
162	34500GRDY/19920V	250	1,372,198.84	188	7,298.93	100,077.89	13.71	3,427.83
163	12470GRDY/ 7200V	250	73,993.35	15	4,932.89	19,105.00	3.87	968.25
164	12470GRDY/ 7200V	250	3,266.99	1	3,266.99	3,266.99	1.00	250.00
165	12470GRDY/ 7200V	250	19,897.20	5	3,979.44	8,898.30	2.24	559.02
166	12470GRDY/ 7200V	250	29,402.91	9	3,266.99	9,800.97	3.00	750.00
167	12470GRDY/ 7200V	250	9,800.97	3	3,266.99	5,658.59	1.73	433.01
168	12470GRDY/ 7200V	250	3,266.99	1	3,266.99	3,266.99	1.00	250.00
169	12470GRDY/ 7200V	3	65,341.50	210	311.15	4,508.99	14.49	43.47
170	12470GRDY/ 7200V	3	3,111.50	10	311.15	983.94	3.16	9.49
171	12470GRDY/ 7200V	333	86,029.60	8	10,753.70	30,416.06	2.83	941.87
172	34500GRDY/19920V	333	9,279.92	1	9,279.92	9,279.92	1.00	333.00
173	34500GRDY/19920V	333	27,839.76	3	9,279.92	16,073.29	1.73	576.77
174	7200/12470Y	333	5,599.95	3	1,866.65	3,233.13	1.73	576.77
175	34500GRDY/19920V	333	13,992.84	3	4,664.28	8,078.77	1.73	576.77
176	34500GRDY/19920V	333	816,632.96	88	9,279.92	87,053.37	9.38	3,123.82
177	12470GRDY/ 7200V	333	11,199.90	6	1,866.65	4,572.34	2.45	815.68
178	12470GRDY/ 7200V	333	4,664.28	1	4,664.28	4,664.28	1.00	333.00
179	12470GRDY/ 7200V	333	13,992.84	3	4,664.28	8,078.77	1.73	576.77
180	12470GRDY/ 7200V	37.5	12,332.11	7	1,761.73	4,661.10	2.65	99.22
181	12470GRDY/ 7200V	37.50	174,195.45	99	1,759.55	17,507.30	9.95	373.12
182	12470GRDY/ 7200V	37.5	1,581,835.45	899	1,759.55	52,757.17	29.98	1,124.37
183	12470GRDY/ 7200V	37.5	1,759.55	1	1,759.55	1,759.55	1.00	37.50
184	12470GRDY/ 7200V	37.5	927,282.85	527	1,759.55	40,393.08	22.96	860.87
185	12470GRDY/ 7200V	37.5	5,620.86	3	1,873.62	3,245.21	1.73	64.95
186	12470GRDY/ 7200V	5	204,114.40	656	311.15	7,969.33	25.61	128.06
187	12470GRDY/ 7200V	5	19,602.45	63	311.15	2,469.68	7.94	39.69
188	12470GRDY/ 7200V	50	2,012.94	1	2,012.94	2,012.94	1.00	50.00
189	12470GRDY/ 7200V	50	13,108,265.28	6,512	2,012.94	162,438.15	80.70	4,034.85
190	12470GRDY/ 7200V	50	790,649.58	402	1,966.79	39,434.02	20.05	1,002.50
191	12470GRDY/ 7200V	50	4,240.08	2	2,120.04	2,998.19	1.41	70.71
192	12470GRDY/ 7200V	50	4,240.08	2	2,120.04	2,998.19	1.41	70.71
193	34500GRDY/19920V	50	361,913.68	136	2,661.13	31,033.84	11.66	583.10
194	34500GRDY/19920V	50	60,116.48	23	2,613.76	12,535.15	4.80	239.79
195	34500GRDY/19920V	50	15,966.78	6	2,661.13	6,518.41	2.45	122.47
196	12470GRDY/7200V	50	16,103.52	8	2,012.94	5,693.45	2.83	141.42
197	12470GRDY/7200V	50	2,012.94	1	2,012.94	2,012.94	1.00	50.00
198	34500GRDY/19920V	50	6,562,788.48	2,736	2,398.68	125,467.24	52.31	2,615.34
199	34500GRDY/19920V	50	505,512.00	224	2,256.75	33,775.94	14.97	748.33
200	34500GRDY/19920V	50	2,398.68	1	2,398.68	2,398.68	1.00	50.00
201	34500GRDY/19920V	50	91,149.84	38	2,398.68	14,786.46	6.16	308.22
202	12470GRDY/7200V	50	20,129.40	10	2,012.94	6,365.48	3.16	158.11
203	12470GRDY/7200V	50	2,012.94	1	2,012.94	2,012.94	1.00	50.00
204	12470GRDY/7200V	50	5,988,496.50	2,975	2,012.94	109,792.91	54.54	2,727.18
205	12470GRDY/7200V	50	62,451.90	30	2,081.73	11,402.10	5.48	273.86
206	12470GRDY/7200V	50	6,245.19	3	2,081.73	3,605.66	1.73	86.60
207	12470GRDY/7200V	50	27,535.06	14	1,966.79	7,359.05	3.74	187.08
208	12470GRDY/7200V	50	129,067.26	62	2,081.73	16,391.56	7.87	393.70
209	12470GRDY/7200V	50	106,685.82	53	2,012.94	14,654.42	7.28	364.01
210	12470GRDY/7200V	500	29,017.96	2	14,508.98	20,518.80	1.41	707.11
211	34500GRDY/19920V	500	30,941.52	3	10,313.84	17,864.09	1.73	866.03
212	34500GRDY/19920V	500	154,707.60	15	10,313.84	39,945.33	3.87	1,936.49
213	34500GRDY/19920V	500	20,627.68	2	10,313.84	14,585.97	1.41	707.11
214	12470GRDY/7200V	500	8,725.46	1	8,725.46	8,725.46	1.00	500.00
215	34500GRDY/19920V	500	10,313.84	1	10,313.84	10,313.84	1.00	500.00
216	34500GRDY/19920V	500	3,754,237.76	364	10,313.84	196,775.53	19.08	9,539.39
217	12470GRDY/7200V	500	17,450.92	2	8,725.46	12,339.66	1.41	707.11
218	12470GRDY/7200V	500	34,901.84	4	8,725.46	17,450.92	2.00	1,000.00
219	12470GRDY/7200V	500	43,526.94	3	14,508.98	25,130.29	1.73	866.03
220	34500GRDY/19920V	667	237,218.32	23	10,313.84	49,463.44	4.80	3,198.82
221	12470GRDY/7200V	7.5	311.15	1	311.15	311.15	1.00	7.50
222	12470GRDY/7200V	7.5	622.30	2	311.15	440.03	1.41	10.61
223	12470GRDY/7200V	7.5	622.30	2	311.15	440.03	1.41	10.61
224	12470GRDY/7200V	75	209,311.44	78	2,683.48	23,699.85	8.83	662.38
225	12470GRDY/7200V	75	56,216.80	20	2,810.84	12,570.46	4.47	335.41
226	34500GRDY/19920V	75	191,365.76	64	2,990.09	23,920.72	8.00	600.00
227	34500GRDY/19920V	75	11,762.88	6	1,960.48	4,802.18	2.45	183.71
228	12470GRDY/7200V	75	2,810.84	1	2,810.84	2,810.84	1.00	75.00
229	12470GRDY/7200V	75	8,432.52	3	2,810.84	4,868.52	1.73	129.90
230	34500GRDY/19920V	75	206,316.21	69	2,990.09	24,837.55	8.31	623.00
231	34500GRDY/19920V	75	67,087.00	25	2,683.48	13,417.40	5.00	375.00
232	12470GRDY/7200V	75	2,683.48	1	2,683.48	2,683.48	1.00	75.00
233	12470GRDY/7200V	75	2,119,373.36	754	2,810.84	77,183.03	27.46	2,059.43
234	12470GRDY/7200V	75	81,642.90	30	2,721.43	14,905.89	5.48	410.79
235	12470GRDY/7200V	75	5,621.68	2	2,810.84	3,975.13	1.41	106.07

Kentucky Power
Zero Intercept & Minimum System Analyses

Account 368 - Transformers

#	Description	Size	Cost	Quantity	Actual Unit Cost ($ per Unit)	y*n^0.5	n^0.5	xn^0.5
236	34500GRDY/19920V	833	36,159.31	1	36,159.31	36,159.31	1.00	833.00
237	34500GRDY/19920V	833	433,911.72	12	36,159.31	125,259.52	3.46	2,885.60
238	TOTAL		$ 175,381,585.52	96,166				
239								
240	**Zero Intercept Linear Regression Results**					**LINEST Array**		
241								
242	Size Coefficient ($ per MCM)		25.36489			25.36489	957.65569	
243	Zero Intercept ($ per Unit)		957.65569			0.69829	52.69681	
244	R-Square		0.9232			0.92322	14,573.24692	
245								
246	**Plant Classification**							
247								
248	Total Number of Units		96,166					
249	Zero Intercept ($/Unit)		$ 957.66					
250	Minimum System ($/Unit)		$ 311.15					
251	Use Min System (M) or Zero Intercept (Z)?		Z					
252	Zero Intercept or Min System Cost ($)		$ 92,093,917					
253	Total Cost of Sample		$ 175,381,586					
254	Percentage of Total		0.5251					
255	Percentage Classified as Customer-Related		52.51%					
256	Percentage Classified as Demand-Related		47.49%					

STATE OF KENTUCKY

KENTUCKY PUBLIC SERVICE COMMISSION

In the Matter of:

Electronic Application of Kentucky Power Company For (1) A General Adjustment Of Its Rates For Electric Service; (2) Approval Of Tariffs And Riders; (3) Approval Of Accounting Practices To Establish Regulatory Assets And Liabilities; (4) A Securitization Financing Order; And (5) All Other Required Approvals And Relief	)))))))	Case No. 2023-00159

DIRECT TESTIMONY OF

MICHAEL J. ADAMS

ON BEHALF OF KENTUCKY POWER COMPANY

DIRECT TESTIMONY OF
MICHAEL J. ADAMS ON BEHALF OF
KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

CASE NO. 2023-00159

TABLE OF CONTENTS

I. INTRODUCTION AND BACKGROUND

Q1. Please state your name and business address.

A1. My name is Michael Adams. My business address is 293 Boston Post Road West, Suite 500, Marlborough, Massachusetts 01752.

Q2. By whom are you employed and in what position?

A2. I am a Senior Vice President with Concentric Energy Advisors, Inc. ("Concentric").

Q3. Please describe Concentric.

A3. Concentric is a management consulting and economic advisory firm focused on the North American energy and water industries. Concentric specializes in regulatory and litigation support, transaction-related financial advisory services, energy market strategies, market assessments, energy commodity contracting and procurement, economic feasibility studies, and capital market analyses and negotiations.

Q4. What are your responsibilities in your current position?

A4. As a consultant, my responsibilities include assisting clients in identifying and addressing business issues. My primary areas of focus have been regulatory-, financial- and accounting-related issues.

Q5. Please describe your education.

A5. I have a Masters of Business Administration in Finance from the University of Illinois – Springfield and a Bachelor of Science in Accounting from Illinois College. I am a certified public accountant and a member of the American Institute of Certified Public Accountants and the Illinois Society of Certified Public Accountants.

Q6. Please describe your work experience.

A6. I have worked for an investor-owned utility, a regulatory agency, and most recently as a consultant to the energy industry. I have managed and/or participated in a wide variety of consulting engagements. A statement of my background and qualifications is attached as Kentucky Power Company Exhibit MJA-1.

Q7. Have you ever testified in a regulatory proceeding?

A7. Yes. I have provided expert testimony or reports before the Arizona Corporation Commission; the Arkansas Public Service Commission; the City of El Paso; the Connecticut Public Utilities Regulatory Authority, the Federal Energy Regulatory Commission (FERC); the Georgia Public Service Commission; the Hawaii Public Utility Commission; the Idaho Public Utilities Commission; the Illinois Commerce Commission; the Maine Public Utilities Commission; the Maryland Public Service Commission; the Massachusetts Department of Telecommunications and Energy; the Missouri Public Service Commission; the Public Service Commission of the State of Montana; the New Hampshire Public Utilities Commission; the New Mexico Public Regulation Commission; the State of New Jersey Board of Public Utilities; the Oklahoma Corporation Commission; the Ontario Energy Board; the Pennsylvania Public Utility Commission; the Tennessee Public Utility Commission; the Public Utility Commission of Texas; the State Corporation Commission of Virginia; and the Public Service Commission of West Virginia.

II. PURPOSE OF TESTIMONY

Q8. What is the purpose of your direct testimony?

A8. I have been asked by Kentucky Power Company ("Kentucky Power" or "the Company") to discuss the lead-lag study that was prepared by Concentric and used to develop cash working capital ("CWC") factors and ultimately to calculate the Company's CWC requirements. The CWC revenue lags and expense leads are set forth on Exhibit MJA-2.

Q9. Are you sponsoring any exhibits to your direct testimony?

A9. Yes. I am sponsoring Exhibit MJA-1, which is a statement of my background and qualifications and Exhibit MJA-2 which includes the calculated lead and lag days.

Q10. Are you sponsoring the Company's CWC requirement?

A10. No, Company Witness Whitney calculates and discusses the Company's CWC requirement in her testimony.

III. CASH WORKING CAPITAL

A. OVERVIEW

Q11. What is "cash working capital"?

A11. CWC is the amount of funds required to finance the day-to-day operations of the Company.

Q12. How is the cash working capital amount determined?

A12. Cash working capital requirements are generally determined by lead-lag studies that are used to analyze the lag time between the date customers receive service and the date customers' payments are received, processed, and available to the Company. This lag is offset by a lead time during which the Company receives goods and services but pays for them at a later date. The "leads" and "lags" are both measured in days. The lead and lag days are then divided by 365 to determine the daily CWC factors. These CWC factors are then multiplied by the annual test year revenues and expenses to determine the amount of cash working capital required for operations. The resulting amount of cash working capital is then included as part of the Company's rate base. The cash working capital adjustment to rate base, computed by applying the leads and lags resulting from my study to the adjusted test year operating revenues and expenses, is described in the direct testimony of Company Witness Whitney.

Q13. What is a lead-lag study?

A13. A lead-lag study is an analysis of the timing of applicable cash inflows to a utility in conjunction with an analysis of the timing of cash outflows from the utility. I will discuss cash inflows and outflows at various points throughout my testimony, but in brief they primarily involve operational expense and revenue items. Leads and lags are measured in days and are dollar-weighted, where appropriate, to reflect the flow of funds.

Q14. Is the approach employed to determine the Company's cash working capital requirements consistent with those that you have used and observed before other utility regulatory commission?

A14. Yes. The methodology that Concentric employed to determine the Company's cash working capital requirement has been adopted by numerous Commissions across the country.

Q15. For what period was the lead-lag study performed?

A15. The lead-lag study analyzed the Company's cash transactions and invoices for the twelve months ended September 30, 2022 ("Study Period"). The period examined appropriately reflects the current practices and timing of the provisioning and receipt of goods and services and the payment for such goods and services, as well as the Company's decision to cease factoring of its accounts receivable in early 2022. The leads and lags were applied to expenses and revenues for the twelve months ending March 31, 2023.

Q16. In general, how did you calculate the leads and lags in the study?

A16. First, I obtained from the Company's Accounts Payable, Customer Service, Human Resources, Payroll, and Tax systems that identified the lead and lag periods for individual transactions during the Study Period for each revenue and expense category. Random sampling and invoice verification was performed, where appropriate. With this information, I calculated weighted averages of the lead and lag periods for each revenue and expense category. These calculations are included in Exhibit MJA-2 the workpapers which will be provided in response to Commission Staff's standard data request to provide all exhibits and schedules that were prepared in the utility's rate application.

Q17. How were the results of the lead-lag study used to determine Kentucky Power's CWC requirement?

A17. Kentucky Power uses what is called a gross lag methodology. Under the gross lag methodology, the revenue lag is divided by 365 days to calculate a CWC factor for revenues. This factor is then applied to total revenues to determine the CWC requirement for revenues. This same methodology was used to calculate the CWC factor for expense leads, which were also divided by 365 to calculate a CWC factor. The resulting factors were applied to expense amounts to determine the CWC requirement for these items. The impact of pass-through taxes and energy assistance charges has also been included in the calculation of the CWC requirement. The methodology used for pass-through taxes and energy assistance charges is explained in detail later in my testimony.

B. REVENUE LAG

Q18. What is a revenue lag and how is it determined?

A18. The revenue lag measures the number of days from the date service was rendered to customers until the date payment was received from customers and such funds become available to the Company.

Q19. What are the components of the revenue lag?

A19. The revenue lag consists of the following components: 1) service lag; 2) billing lag; 3) collection lag; 4) payment processing lag; and 5) bank float.

Q20. What is meant by service lag?

A20. Service lag refers to the period of time from when service is rendered to customers until the time the customers' meters are read. The average service lag was determined to be 15.21 days (i.e., 365 days of the year divided by 12 months divided by 2). Twelve months was appropriate to use for the purpose of determining the service lag given that Kentucky Power bills its customers monthly.

Q21. What is the mid-point methodology?

A21. To determine the service lead or lag, it was assumed that service was provided (or received) ratably over a given period (i.e., a month). For example, with the revenue lag, it was assumed that a customer received electric service ratably over an entire month and not just at the end of a month. Adding the one-half month to the derivation of the lead or lag is referred to as the mid-point methodology.

Q22. What is meant by "billing lag"?

A22. Billing lag refers to the average number of days from the date on which the customers' meters were read until the date the customers are billed. Based on information provided by the Company, customers are billed the day after a meter reading occurs. Based on this information, a billing lag of 1.46 days was determined.

Q23. What is meant by "collection lag"?

A23. The collection lag refers to the average amount of time from the date Kentucky Power issues a bill to the customer to the date that the Company receives payment from that customer. The collection lag was calculated using accounts receivable aging data for the Study Period. Based on the analysis of this data, Kentucky Power's average collections lag was determined to be 32.73 days.

Q24. Has the Company requested an additional 6 days be added to the collection lag?

A24. Yes, Company Witness Cobern is supporting the Company's proposal to extend customers' bill payment due date from 15 to 21 days. To account for that change, 6 days were added to the median collection lag days.

Q25. What is the payment processing lag?

A25. The payment processing lag reflects the time between the receipt of a customer's payment and the payment being processed and deposited into the Company's bank account. Based on information provided by the Company, approximately 20 percent of payments are deposited on the same day as received, 61 percent are deposited the following day, and 19 percent are deposited the second day. Using this information, a payment processing lag of 0.99 days was calculated.

Q26. What is meant by bank float?

A26. Bank float refers to the time between the Company's deposit of the customers' payment and the time the funds are available to the Company. Bank float data provided by the Company for the Study Period reflected a float time of 1.10 days between the date of deposit and the date the Company had access to the funds.

Q27. Please summarize Kentucky Power's revenue lag.

A27. Kentucky Power's revenue lag, by lag component, is summarized as follows:

Service Lag	15.21
Billing Lag	1.46
Collections Lag	32.73
Payment Processing Lag	0.99
Bank Float	1.10
Total Lag Days	51.49

C. LEADS AND LAGS FOR PASS-THROUGH TAXES AND ENERGY ASSISTANCE CHARGES

Q28. What are pass-through taxes and energy assistance charges?

A28. Under state law and municipal ordinances, Kentucky Power is subject to taxes and charges that are added to customers' bills. These amounts are typically referred to as "pass-through" taxes. The Company is required to bill, collect, and remit these taxes and charges to various governmental agencies. The billing, collection, and payment or remittance of these taxes and charges create a timing difference in the Company's cash flows that needs to be accounted for in Kentucky Power's CWC requirements.

Q29. What taxes other than income taxes were analyzed in the CWC study?

A29. The following taxes and charges have been included in the study: (1) Kentucky Sales and Use Tax; (2) Utility Gross Receipts License Tax; (3) Federal Excise Taxes; (4) Local Franchise Fees; (5) Kentucky Sales and Use Tax – Energy Exemption Annual Return; (6) Local Street Lighting Fee; (7) Property/ Real Estate Tax; (8) Federal Unemployment Taxes; (9) Kentucky Unemployment Taxes; and (10) West Virginia Unemployment Taxes.

Q30. How were the taxes other than income taxes handled in your study?

A30. Pass-through taxes are included on the customers' monthly bills and the Company receives payments from its customers for these taxes at the same time as all other payments. Based on this information, the lag for collection of pass-through taxes and energy assistance charges is 51.49 days, which is the same as the overall revenue lag.

Q31. What are the leads associated with each type of taxes other than income taxes that you considered in the cash working capital analysis?

A31. The treatment of each category of tax included in the study is described below:

1. State Sales and Use Tax: The Company is required to pay this tax monthly. The amounts are paid electronically and based on statutory filing and payment dates in the Study Period, a lead time of 40.23 days was calculated.
2. Utility Gross Receipts License Tax: The Company pays the taxes to fund schools. The Utility Gross Receipts License Tax is paid electronically. Based on the statutory filing and payment dates in the Study Period, a lead time of 35.28 days was calculated.

3. Federal Excise Taxes: The Company pays Federal Excise Taxes to the Internal Revenue Service quarterly. All Federal Excise tax payments are paid electronically. Based on the statutory filing and payment dates in the Study Period, a lead time of 76.42 days was calculated.

4. Local Franchise Fee: The Company is required to pay franchise fees to various cities throughout Kentucky on either a monthly or quarterly basis. The payment frequency is determined by the ordinance approved by each locality. All Local Franchise Fee payments are paid via check. Based on statutory filing and payment dates in the Study Period, a lead time of 46.12 days was calculated.

5. Kentucky Sales and Use Tax – Energy Exemption Annual Return: Kentucky Power is required to file an annual energy exemption return and report the calculated estimate for energy purchases on the sales and use tax return monthly. Based on statutory filing and payment dates in the Study Period, a lead time of 59.42 days was calculated.

6. Local Street Lighting Fee: Kentucky Power is obligated to pay street lighting fees to various localities. Based on statutory filing and payment dates in the Study Period a lead time of 207.23 days was calculated.

7. Property/ Real Estate Taxes: The state of Kentucky taxes all property which is not specifically exempted by the state constitution. Kentucky Power pays property/real estate taxes to more than 30 Kentucky counties. The payment frequency is determined by the ordinance approved by each locality, and all property tax payments are paid via check. Based on statutory filing and payment dates in the Study Period, a lead time of 264.85 days was calculated.

8. Federal Unemployment Taxes: These taxes are remitted based on schedules provided by the Internal Revenue Service. Based on statutory filing and payment dates in the Study Period, a lead time of 75.24 days was calculated.

9. Kentucky Unemployment Taxes: These taxes are remitted based on schedules provided by the Kentucky Department of Revenue. Based on statutory filing and payment dates in the Study Period, a lead time of 75.21 days was calculated.

10. West Virginia Unemployment Taxes: These taxes are remitted based on remittance dates provided by the West Virginia Department of Revenue. Based on the statutory filing and payment dates in the Study Period, a lead time of 75.31 days was calculated.

Q32. How did you analyze federal and state income taxes for the lead-lag study?

A32. The Company is required to pay its federal and state income taxes four times a year, on April 15th, June 15th, September 15th, and December 15th for the current year. Using those payment dates for the Study Period, a lead time of 37.88 days was determined. This lead was applied to the current income taxes payable.

Q33. Has the Company reflected the revenue lag of 51.49 days for taxes other than income taxes?

A33. Yes. The lag is being shown separately in the revenue section of Exhibit MJA-2. For the other taxes, the Company has reflected a zero lag in the revenue section of Exhibit MJA-2 and netted the revenue lag against the lead calculations.

Q34. Does the Company track the collection of these other taxes separately?

A34. No, the funds are included on customers' bills and the funds are part of customers' overall payments.

D. EXPENSE LEADS

Q35. What is an expense lead?

A35. An expense lead is the time difference between when a good or service is provided to Kentucky Power and when the Company pays for that good or service.

Q36. How is an expense lead determined?

A36. An expense lead typically consists of three components: (1) a service lead, (2) a payment lead, and (3) a check float lead if the amount is paid by check. The service lead assumes that the goods and services are received ratably over the service period, which in many cases is a month. The payment lead represents the elapsed time from the end of the service period until the payment is made. Check float reflects the elapsed time between the date the payment is made and the date the cash leaves the Company's bank account.

Q37. What expense-related leads were considered in the lead-lag analysis?

A37. Lead times associated with the following expense categories were considered in the study: (1) Payroll and Withholdings, (2) Employee Benefits; (3) Fuel Purchases, (4) Purchased Power, (5) Other Operation and Maintenance Expenses, (6) Intercompany Billings, (7) Taxes Other than Income Taxes, (8) Interest Expense, and (9) Federal and State Income Taxes.

Q38. Please explain the lead associated with Kentucky Power's payroll and withholding expenses.

A38. As part of the study, the Company's payroll records for the Study Period year were reviewed and analyzed. The Company's employees are paid on a bi-weekly basis every other Friday. The majority of the Company's employees are paid via direct deposit. The Company remits payroll-related withholdings to the Federal and State governments on the payroll dates. Utilizing Study Period pay period information, a weighted lead time of 13.82 days was determined.

Q39. What employee benefits does the Company provide to its employees?

A39. Company Witness Carlin describes the Company's employee compensation and benefits in his testimony.

Q40. How was the expense lead time associated with fuel purchases determined?

A40. The Company purchases commodity, pipeline, and transportation services from various suppliers on a monthly basis. Typically, the Company receives invoices for these services around the middle of the following month. Payments for these purchases are typically due within 15 days. Based on actual amounts and payment dates during the Study Period, a dollar-weighted lead of 23.00 days was determined.

Q41. What is the expense lead time associated with purchased power?

A41. The Company purchases power through contracted power purchase agreements. Based on the purchased power records during the Study Period provided by the Company, a lead time of 27.92 days was determined.

Q42. How was the expense lead time associated with intercompany billings determined?

A42. Kentucky Power is a subsidiary of American Electric Power ("AEP") and receives and billed for the various services from its parent company and other affiliated companies. Kentucky Power pays its affiliates when services are provided, or when an affiliate company pays an invoice that should be borne by multiple AEP companies. The billing for both the services received and the services provided is done monthly and settlement is routinely done by the end of the month following the month of service. The payments are made electronically. Based on a review and analysis of Study Period data, a lead time of 18.21 days was determined.

Q43. What are the lead times associated with other operations and maintenance ("O&M") expenses?

A43. The Company engages in transactions with various vendors for a variety of services. These transactions include such items as parts, supplies, facility and system maintenance, customer service, and legal services. A random sample of these transactions and invoices were reviewed to determine the service periods covered and the payment terms. Using this sample set of data and actual payment dates, a dollar-weighted lead time of 58.44 days was determined.

Q44. How was the expense lead time associated with fuel purchases determined?

A44. The Company purchases commodity, pipeline, and transportation services from various suppliers on a monthly basis. Typically, the Company receives invoices for these services around the middle of the following month. Payments for these purchases are typically due within 15 days. Based on actual amounts and payment dates during the Study Period, a dollar-weighted lead of 23.00 days was determined.

Q45. Can you provide a description of how the lead time associated with the Company's interest expense was analyzed for the lead-lag study?

A45. The Company's interest expense is associated with a combination of long- and short-term debt. Using Study Period interest payment information, a lead time of 82.05 days was calculated.

Q46. When Kentucky Power pays an expense by check, was check float included as part of the lead time calculation?

A46. Yes. Check float is the difference in time between the date Kentucky Power mailed a check to a vendor and the date the cash left the Company's bank account.

Q47. How was the check float determined?

A47. Concentric examined a list of checks issued by the Company during the Study Period, including the dates that the checks were issued and the date the checks cleared the bank. Based on the analysis, a float time of 12.73 days was determined. The check float was added to all checks as part of the CWC review.

IV. <u>CONCLUSION</u>

Q48. Have you prepared an exhibit that summarizes the leads and lags resulting from the cash working capital analysis?

A48. Yes. Exhibit MJA-2 summarizes the leads and lags derived from the cash working capital study prepared by Concentric.

Q49. How should the results of the CWC study be reflected in the Company's rate filing?

A49. The CWC requirement determined by the lead-lag study should be included as a component of the Company's rate base.

Q50. In addition to the cash working capital requirement that you have discussed in your direct testimony, which is supported by a lead-lag study, has the Company also included certain working capital items in rate base?

A50. Yes. Company Witness Walsh presents the jurisdictional cost of service, including jurisdictional rate base, which reflects end of test-year amount of the various working capital components. The end of test-year amount of these components is appropriately included in the Company's rate base.

Q51. In your experience, is it an appropriate regulatory practice to include the end of test-year amount of the components discussed by Company Witness Walsh in rate base?

A51. Yes. It is a widely accepted regulatory practice to include such components of the Company's overall working capital requirement in the Company's rate base.

Q52. Does the inclusion of both cash working capital and the end of test-year amounts of working capital in rate base result in a duplication or double counting?

A52. No, the cash working capital study examines the timing of certain O&M cash flows, while the working capital items represent the end of test-year amount of certain rate base components.

Q53. Is it your recommendation that both the CWC requirement and the end of test-year amount of working capital components be included in the Company's rate base?

A53. Yes. It is my recommendation that both the cash working capital requirement be determined, in part, based upon the lead-lag study, as well as the end of test-year amounts of non-cash working capital components as previously discussed.

Q54. Does this conclude your direct testimony?

A54. Yes, it does.

VERIFICATION

The undersigned, Michael J. Adams, being duly sworn, deposes and says he is the Senior Vice President, for Concentric Energy Advisors, Incorporated, that he has personal knowledge of the matters set forth in the foregoing testimony and the information contained therein is true and correct to the best of his information, knowledge, and belief after reasonable inquiry.

Michael J. Adams

Michael J. Adams

Commonwealth of Illinois)
) Case No. 2023-00159
County of Sangamon)

Subscribed and sworn to before me, a Notary Public in and before said County and State, by Michael J. Adams, on June 27, 2023

Notary Public

MICHELLE KEOKHAM
Official Seal
Notary Public- State of Illinois
My Commission Expires March 17, 2026

My Commission Expires 3/17/2026

Notary ID Number 779582

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ENERGY • SERVICE • TRUST
20YearsTogether

MICHAEL J. ADAMS

Senior Vice President

Mr. Adams has over thirty-five years of direct experience in the public utility industry. He has worked for an investor-owned utility, a regulatory agency, and most recently as a consultant to the utility industry.

While employed by Illinois Power Company, Mr. Adams monitored project expenditures associated with gas and electric distribution, transmission, and generation capital projects.

While employed by the Illinois Commerce Commission, Mr. Adams initially evaluated the rate filings of regulated utilities and provided expert testimony regarding the reasonableness of the requests. Mr. Adams was subsequently charged with developing and managing a management and operations audit program to evaluate company management policies, procedures and performance, as well as operational efficiency and effectiveness. Mr. Adams served as the Deputy Executive Director of the agency at the time of his departure. As a consultant, Mr. Adams has provided consulting services to regulatory agencies and regulated utilities on an array of operational and financial issues since 1995.

Prior to joining Concentric, Mr. Adams was a Managing Director of Navigant Consulting, Inc. Mr. Adams is a Certified Public Accountant, a graduate of Illinois College and holds an M.B.A. from the University of Illinois, Springfield.

Mr. Adams provides financial, regulatory, strategic, operational and litigation support to his energy clients. He has assisted clients with regulatory/legislative initiatives related to the approval and implementation of alternative regulation plans as well as the preparation and support of regulatory filings under alternative rate plans. Mr. Adams also provides advisory services in the areas of mergers and acquisitions. As a consultant, Mr. Adams has provided expert testimony or reports before State and Federal regulatory agencies.

PROFESSIONAL HISTORY

Concentric Energy Advisors, Inc. (2007 – Present)

Senior Vice President
Vice President

Navigant Consulting, Inc. (1999 – 2007)

Managing Director

L.E. Burgess Consultants, Inc. (1995 – 1999)

Illinois Commerce Commission (1983 – 1995)

Accounting/Rate Case Staff
Director, Management Audit/Studies
Deputy Executive Director

Illinois Power Company (1981 – 1983)
Accounting/Auditing Department

EDUCATION

University of Illinois at Springfield
M.B.A., Finance

Illinois College
B.S., Accounting

REPRESENTATIVE PROJECT EXPERIENCE

Audits/Special Studies

- Management audits
- Regulatory reviews/audits
- Project performance monitoring/reviews
- Prudence reviews
- Commission ordered studies
- Audit prep and support
- Project controls and assessments

Affiliate Transactions

- Code of Conduct
- Shared Services reviews
- Cost controls

Benchmarking

- O&M costs
- Capital expenditures
- Shared Services
- Operational performance
- Customer service
- Reliability

Due Diligence/Litigation/Special Projects

- Assessment of cost controls
- Financial outlook
- Historical/future performance assessment
- Merger Synergies
- Regulatory environment/assessment

Expert Witness

- **Regulatory proceedings**
- Civil litigation

Litigation Support

- Data review and analyses
- Position development and review
- Research
- Expert testimony and reports

Regulatory Proceedings

- Revenue Requirement
- Cash working capital
- Benchmarking
    - O&M
    - Capital
    - Shared Services
- Case development/management
- Multi-year rate plans
- Research
- Performance based regulation

DESIGNATIONS AND PROFESSIONAL AFFILIATIONS

Certified Public Accountant

American Institute of Public Accountants

Illinois Society of Certified Public Accountants

AVAILABLE UPON REQUEST

Extensive client and project listings, and specific references.

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Arkansas Public Service Commission				
Arkansas Oklahoma Gas Corporation	2002	Arkansas Oklahoma Gas Corporation	02-024-U	Reasonableness of ratemaking adjustments
Centerpoint Energy Arkla	2005	Centerpoint Energy Arkla	04-121-U	Cash Working Capital
Arizona Corporation Commission				
Liberty Utilities (Entrada Del Oro Sewer Company and Gold Canyon Sewer Company	2022	Liberty Utilities	SW-02519A-0235, SW-0362+A-21-0236, SW-04316A-21-0359	Indirect Overhead/Capitalization Rates
Connecticut Public Utilities Regulatory Authority				
Connecticut Natural Gas	2013	Connecticut Natural Gas	13-06-08	Cash Working Capital
United Illuminating Company	2022	United Illuminating Company	22-08-08	Cash Working Capital
Federal Energy Regulatory Commission				
Granite State Gas Transmission	2010	Granite State Gas Transmission	RP10-896	Revenue Requirement
Georgia Public Service Commission				
Atlanta Gas Light Company	2019	Granite State Gas Transmission	42315	Cash Working Capital
Hawaii Public Utilities Commission				
Hawaii Electric Light Company, Inc.	2005	Hawaii Electric Light Company, Inc.	05-0315	Allowance for Funds Used During Construction
Idaho Public Utilities Commission				
Intermountain Gas Company	2016	Intermountain Gas Company	INT-G-16-2	Cash working capital, prepared/supported benchmarking for client
Illinois Commerce Commission				
Illinois Power Company	1999	Illinois Power Company	99-0120/99-0134 (Cons.)	Functionalization/Unbundling of General and Intangible Assets and Administrative and General expenses.
Illinois Power Company	2004	Illinois Power Company	04-0476	Cash working capital and asset separation

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Ameren Illinois Utilities	2006	Ameren Illinois Utilities	06-0070/06-0071/06-0072 (Cons.)	Functionalization of Assets, Cash Working Capital, Shared Services Costs, Benchmarking
Ameren Illinois Utilities	2007	Ameren Illinois Utilities	07-0585/07-0586/07-0587/ 07-0588/07-0589/07-0590 (Cons.)	Shared Services Costs, Asset Separation, Cash Working Capital
The Peoples Gas Light and Coke Company, Inc. and North Shore Gas Company	2007	The Peoples Gas Light and Coke Company, Inc. and North Shore Gas Company	07-0241/07-0242 (Cons.)	Cash working capital
Northern Illinois Gas Company	2008	Northern Illinois Gas Company	08-0363	Cash working capital
Ameren Illinois	2015	Ameren Illinois	16-0262	Benchmarking of Utility Performance
Commonwealth Edison Company	2022	Commonwealth Edison Company	22-0645	Rider ZEA Reconciliation
Commonwealth Edison Company	2022	Commonwealth Edison Company	22-0103	Rider PE Reconciliation
Maine Public Utilities Commission				
Emera Maine	2017	Emera Maine	Docket No. 2017-00198	Cash working capital
Versant Power	2020	Versant Power	Docket No. 2020-00316	Cash working capital
Versant Power	2022	Versant Power	Docket No. 2022-00255	Cash working capital
Maryland Public Service Commission				
Constellation Energy	2009	Constellation Energy	Case No. 9173, Phase II	Shared Services, Benchmarking
Massachusetts Department of Public Utilities				
Massachusetts Distribution Companies	2002	Massachusetts Distribution Companies	DTE-99-84	Reliability standards and the appropriateness of utilizing data for benchmarking purposes
Missouri Public Service Commission				
AmerenUE (Union Electric Company)	2002	AmerenUE (Union Electric Company)	EC-2002-001	Cash working capital

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
AmerenUE	2003	AmerenUE	GR-2003-0517	Cash working capital
AmerenUE	2007	AmerenUE	ER-2007-0002	Cash working capital
AmerenUE	2008	AmerenUE	ER-2008-0318	Cash working capital
Missouri Gas Energy	2006	Missouri Gas Energy	GR-2006-0422	Cash working capital
Ameren Missouri Gas	2010	Ameren Missouri Gas	GR-2010-0363	Cash working capital
Ameren Missouri Electric	2010	Ameren Missouri Electric	ER-2011-0028	Cash working capital
Ameren Missouri	2012	Ameren Missouri	ER-2012-0166	Cash working capital
Ameren Missouri	2014	Ameren Missouri	ER-2014-0258	Affiliate transactions, Benchmarking
Evergy Metro, Inc.	2022	Evergy Metro, Inc.	ER-2022-0129	Cash working capital, Property Tax Tracker
Evergy Missouri West, Inc.	2022	Evergy Missouri West, Inc.	ER-2022-0130	Cash working capital, Property Tax Tracker
Public Service Commission of Montana				
Montana-Dakota Utilities	2022	Montana-Dakota Utilities	2022.11.XXXX	Cash working capital
New Hampshire Public Utilities Commission				
National Grid Energy North	2010	National Grid Energy North	DG 10-017	Revenue Requirement
New Mexico Public Regulation Commission				
New Mexico Gas Company	2019	New Mexico Gas Company	No. 19-00317-UT	Future Test Year Model / Revenue Requirement
State of New Jersey Board of Public Utilities				
PSEG	2018	PSEG	ER18010029 & GR18010030	Benchmarking
Oklahoma Corporation Commission				
Arkansas Oklahoma Gas Corporation	2003	Arkansas Oklahoma Gas Corporation	PUD200300088	Cash working capital
Ontario Energy Board				
Hydro One Distribution Business	2005	Hydro One Distribution Business	-	Cash working capital

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Hydro One Transmission Business	2006	Hydro One Transmission Business	-	Cash working capital
Toronto Hydro	2006	Toronto Hydro	-	Cash working capital
Pennsylvania Public Utility Commission				
Allegheny Power	2004	Allegheny Power	M-00991220	Reliability data and reasonableness of established standards
T.W. Phillips Gas and Oil Company, Inc.	2006	T.W. Phillips Gas and Oil Company, Inc.	R-00051178	Cash working capital
Public Utility Commission of Texas				
Texas-New Mexico Power Company	2008	Texas-New Mexico Power Company	36025	Revenue Requirement
El Paso Electric Company	2012	El Paso Electric Company	40094	O&M Benchmarking
El Paso Electric Company	2014	El Paso Electric Company	-	Benchmarking of New Generation Costs
El Paso Electric Company	2015	El Paso Electric Company	44941	Benchmarking of costs of new generation units
Public Service Commission of West Virginia				
Appalachian Power Company	2018	Appalachian Power Company	18-0646-E-42T	Cash working capital
Tennessee Public Utility Commission				
Chattanooga Gas Company	2018	Chattanooga Gas Company	18-00017	Cash working capital
Virginia State Corporation Commission				
Virginia Natural Gas	2012	Virginia Natural Gas	PUE-2010-00142	Cash Working Capital
Virginia Natural Gas	2017	Virginia Natural Gas	-	Shared Services Review, Benchmarking, Cash Working Capital
Virginia Natural Gas	2022	Virginia Natural Gas	PUR-2022-00052	Cash working capital

Kentucky Power Company

Summary of Lead Lag Days
12 months ended September 30, 2022
Case No. 2023-00159

Line No.	Description	Lead
1	Revenues	51.49
2	Fuel Expense	23.00
3	Payroll & Benefits	13.82
4	Other Operation & Maintenance Expense	58.44
5	Purchased Power	27.92
6	Sales/Use Tax	40.23
7	Utility Gross Receipts License Tax (UGRLT)	35.28
8	Federal Excise Taxes	76.42
9	Local Franchise Fee	46.12
10	Kentucky Sales and Use Tax - Energy Exemption Annual Return	59.42
11	Local Street Lighting Fee	207.23
12	Property /Real Estate Tax	264.85
13	Federal Unemployment Taxes	75.24
14	State Unemployment Taxes - Kentucky	75.21
15	State Unemployment Taxes - West Virginia	75.31
16	Interest Expense	82.05
17	Federal Income Tax	37.88
18	State Income Tax	37.88

KENTUCKY POWER COMPANY
LEAD LAG STUDY
REVENUE LAG

	Lag Time
Service Lag	15.21
Billing Lag	1.46
Collections Lag	32.73
Payment Processing Lag	0.99
Bank Float	1.10
	51.49

SERVICE LAG

Number of Days in Year:	365.00	
Average Number of Days in Month:	30.42	
Midpoint of Average Number of Days in Month:	15.21	days

BILLING LAG

Average Billing Lag (Scheduled) 1.46 days

Biling Cycle	Scheduled Read Day [1]	Date Bill Mailed [2]	Lag
(A)	(B)	(C)	(D)
4	10/1/21	10/4/21	3
5	10/4/21	10/5/21	1
6	10/5/21	10/6/21	1
7	10/6/21	10/7/21	1
8	10/7/21	10/8/21	1
9	10/8/21	10/11/21	3
10	10/11/21	10/12/21	1
11	10/12/21	10/13/21	1
12	10/13/21	10/14/21	1
13	10/14/21	10/15/21	1
14	10/15/21	10/18/21	3
15	10/18/21	10/19/21	1
16	10/19/21	10/20/21	1
17	10/20/21	10/21/21	1
18	10/21/21	10/22/21	1
19	10/22/21	10/25/21	3
20	10/25/21	10/26/21	1
21	10/26/21	10/27/21	1
1	10/27/21	10/28/21	1
2	10/28/21	10/29/21	1
3	10/29/21	11/1/21	3
4	11/1/21	11/2/21	1
5	11/2/21	11/3/21	1
6	11/3/21	11/4/21	1
7	11/4/21	11/5/21	1
8	11/5/21	11/8/21	3
9	11/8/21	11/9/21	1
10	11/9/21	11/10/21	1
11	11/10/21	11/11/21	1
12	11/11/21	11/12/21	1
13	11/12/21	11/15/21	3
14	11/15/21	11/16/21	1
15	11/16/21	11/17/21	1
16	11/17/21	11/18/21	1
17	11/18/21	11/19/21	1
18	11/19/21	11/22/21	3
19	11/22/21	11/23/21	1
20	11/23/21	11/24/21	1
21	11/24/21	11/29/21	5
1	11/29/21	11/30/21	1
2	11/30/21	12/1/21	1
3	12/1/21	12/2/21	1
4	12/2/21	12/3/21	1
5	12/3/21	12/6/21	3
6	12/6/21	12/7/21	1

7	12/7/21	12/8/21	1
8	12/8/21	12/9/21	1
9	12/9/21	12/10/21	1
10	12/10/21	12/13/21	3
11	12/13/21	12/14/21	1
12	12/14/21	12/15/21	1
13	12/15/21	12/16/21	1
14	12/16/21	12/17/21	1
15	12/17/21	12/20/21	3
16	12/20/21	12/21/21	1
17	12/21/21	12/22/21	1
18	12/22/21	12/27/21	5
19	12/27/21	12/28/21	1
20	12/28/21	12/29/21	1
21	12/29/21	12/30/21	1
1	12/30/21	1/3/22	4
2	1/3/22	1/4/22	1
3	1/4/22	1/5/22	1
4	1/5/22	1/6/22	1
5	1/6/22	1/7/22	1
6	1/7/22	1/10/22	3
7	1/10/22	1/11/22	1
8	1/11/22	1/12/22	1
9	1/12/22	1/13/22	1
10	1/13/22	1/14/22	1
11	1/14/22	1/17/22	3
12	1/17/22	1/18/22	1
13	1/18/22	1/19/22	1
14	1/19/22	1/20/22	1
15	1/20/22	1/21/22	1
16	1/21/22	1/24/22	3
17	1/24/22	1/25/22	1
18	1/25/22	1/26/22	1
19	1/26/22	1/27/22	1
20	1/27/22	1/28/22	1
21	1/28/22	1/31/22	3
1	1/31/22	2/1/22	1
2	2/1/22	2/2/22	1
3	2/2/22	2/3/22	1
4	2/3/22	2/4/22	1
5	2/4/22	2/7/22	3
6	2/7/22	2/8/22	1
7	2/8/22	2/9/22	1
8	2/9/22	2/10/22	1
9	2/10/22	2/11/22	1
10	2/11/22	2/14/22	3
11	2/14/22	2/15/22	1
12	2/15/22	2/16/22	1
13	2/16/22	2/17/22	1
14	2/17/22	2/18/22	1
15	2/18/22	2/21/22	3
16	2/21/22	2/22/22	1
17	2/22/22	2/23/22	1
18	2/23/22	2/24/22	1
19	2/24/22	2/25/22	1
20	2/25/22	2/28/22	3
21	2/28/22	3/1/22	1
1	3/1/22	3/2/22	1
2	3/2/22	3/3/22	1
3	3/3/22	3/4/22	1
4	3/4/22	3/7/22	3
5	3/7/22	3/8/22	1
6	3/8/22	3/9/22	1
7	3/9/22	3/10/22	1
8	3/10/22	3/11/22	1
9	3/11/22	3/14/22	3
10	3/14/22	3/15/22	1
11	3/15/22	3/16/22	1
12	3/16/22	3/17/22	1
13	3/17/22	3/18/22	1

14	3/18/22	3/21/22	3
15	3/21/22	3/22/22	1
16	3/22/22	3/23/22	1
17	3/23/22	3/24/22	1
18	3/24/22	3/25/22	1
19	3/25/22	3/28/22	3
20	3/28/22	3/29/22	1
21	3/29/22	3/30/22	1
1	3/30/22	3/31/22	1
2	3/31/22	4/1/22	1
3	4/1/22	4/4/22	3
4	4/4/22	4/5/22	1
5	4/5/22	4/6/22	1
6	4/6/22	4/7/22	1
7	4/7/22	4/8/22	1
8	4/8/22	4/11/22	3
9	4/11/22	4/12/22	1
10	4/12/22	4/13/22	1
11	4/13/22	4/14/22	1
12	4/14/22	4/18/22	4
13	4/18/22	4/19/22	1
14	4/19/22	4/20/22	1
15	4/20/22	4/21/22	1
16	4/21/22	4/22/22	1
17	4/22/22	4/25/22	3
18	4/25/22	4/26/22	1
19	4/26/22	4/27/22	1
20	4/27/22	4/28/22	1
21	4/28/22	4/29/22	1
1	4/29/22	5/2/22	3
2	5/2/22	5/3/22	1
3	5/3/22	5/4/22	1
4	5/4/22	5/5/22	1
5	5/5/22	5/6/22	1
6	5/6/22	5/9/22	3
7	5/9/22	5/10/22	1
8	5/10/22	5/11/22	1
9	5/11/22	5/12/22	1
10	5/12/22	5/13/22	1
11	5/13/22	5/16/22	3
12	5/16/22	5/17/22	1
13	5/17/22	5/18/22	1
14	5/18/22	5/19/22	1
15	5/19/22	5/20/22	1
16	5/20/22	5/23/22	3
17	5/23/22	5/24/22	1
18	5/24/22	5/25/22	1
19	5/25/22	5/26/22	1
20	5/26/22	5/27/22	1
21	5/27/22	5/31/22	4
1	5/31/22	6/1/22	1
2	6/1/22	6/2/22	1
3	6/2/22	6/3/22	1
4	6/3/22	6/6/22	3
5	6/6/22	6/7/22	1
6	6/7/22	6/8/22	1
7	6/8/22	6/9/22	1
8	6/9/22	6/10/22	1
9	6/10/22	6/13/22	3
10	6/13/22	6/14/22	1
11	6/14/22	6/15/22	1
12	6/15/22	6/16/22	1
13	6/16/22	6/17/22	1
14	6/17/22	6/20/22	3
15	6/20/22	6/21/22	1
16	6/21/22	6/22/22	1
17	6/22/22	6/23/22	1
18	6/23/22	6/24/22	1
19	6/24/22	6/27/22	3
20	6/27/22	6/28/22	1

21	6/28/22	6/29/22	1
1	6/29/22	6/30/22	1
2	6/30/22	7/1/22	1
3	7/1/22	7/5/22	4
4	7/5/22	7/6/22	1
5	7/6/22	7/7/22	1
6	7/7/22	7/8/22	1
7	7/8/22	7/11/22	3
8	7/11/22	7/12/22	1
9	7/12/22	7/13/22	1
10	7/13/22	7/14/22	1
11	7/14/22	7/15/22	1
12	7/15/22	7/18/22	3
13	7/18/22	7/19/22	1
14	7/19/22	7/20/22	1
15	7/20/22	7/21/22	1
16	7/21/22	7/22/22	1
17	7/22/22	7/25/22	3
18	7/25/22	7/26/22	1
19	7/26/22	7/27/22	1
20	7/27/22	7/28/22	1
21	7/28/22	7/29/22	1
1	7/29/22	8/1/22	3
2	8/1/22	8/2/22	1
3	8/2/22	8/3/22	1
4	8/3/22	8/4/22	1
5	8/4/22	8/5/22	1
6	8/5/22	8/8/22	3
7	8/8/22	8/9/22	1
8	8/9/22	8/10/22	1
9	8/10/22	8/11/22	1
10	8/11/22	8/12/22	1
11	8/12/22	8/15/22	3
12	8/15/22	8/16/22	1
13	8/16/22	8/17/22	1
14	8/17/22	8/18/22	1
15	8/18/22	8/19/22	1
16	8/19/22	8/22/22	3
17	8/22/22	8/23/22	1
18	8/23/22	8/24/22	1
19	8/24/22	8/25/22	1
20	8/25/22	8/26/22	1
21	8/26/22	8/29/22	3
1	8/29/22	8/30/22	1
2	8/30/22	8/31/22	1
3	8/31/22	9/1/22	1
4	9/1/22	9/2/22	1
5	9/2/22	9/6/22	4
6	9/6/22	9/7/22	1
7	9/7/22	9/8/22	1
8	9/8/22	9/9/22	1
9	9/9/22	9/12/22	3
10	9/12/22	9/13/22	1
11	9/13/22	9/14/22	1
12	9/14/22	9/15/22	1
13	9/15/22	9/16/22	1
14	9/16/22	9/19/22	3
15	9/19/22	9/20/22	1
16	9/20/22	9/21/22	1
17	9/21/22	9/22/22	1
18	9/22/22	9/23/22	1
19	9/23/22	9/26/22	3
20	9/26/22	9/27/22	1
21	9/27/22	9/28/22	1
1	9/28/22	9/29/22	1
2	9/29/22	9/30/22	1
3	9/30/22	10/3/22	3
			1.46

PAYMENT PROCESSING LAG

	Amount	Weight	Lag	Weighted Lead
Checkless Payment	$ 60,407,943.01	9.70%	0	0.000
In-Person Payments	29,768,384.41	4.78%	0	0.000
Electronic Remittance	98,629,584.86	15.84%	2	0.317
ER Direct Send	10,217,428.42	1.64%	0	0.000
DELX Remit Exception	22,084,363.82	3.55%	0	0.000
BNYN Remittance	42,591.52	0.01%	0	0.000
BNYN Remittance	191,640,558.64	30.79%	1	0.308
BNYN Remittance	21,274,465.84	3.42%	2	0.068
Bill Matrix Payment	187,317,449.55	30.09%	1	0.301
PRIM Payment	1,103,592.70	0.18%	0	0.000
	$ 622,486,362.77	100.00%		0.99 days

BANK FLOAT

	Amount	% of Total	Weighted Average
Toal Same Day	$ 42,591.52	0.02%	-
Total 1 Day Float	$ 191,640,558.64	89.99%	0.90
Total 2 Day Float	$ 21,274,465.84	9.99%	0.20
Total	$ 212,957,616.00		1.10 days

Month	Same Day	1 Day Float	2 Day Float	Total Amount
Oct-21	$ 3,082.18	$ 13,868,276.85	$ 1,539,549.79	$ 15,410,908.82
Nov-21	3,201.40	14,404,683.46	1,599,097.54	16,006,982.40
Dec-21	3,150.67	14,176,454.86	1,573,761.35	15,753,366.89
Jan-22	3,981.29	17,913,820.69	1,988,655.06	19,906,457.04
Feb-22	4,308.24	19,384,909.59	2,151,964.07	21,541,181.90
Mar-22	4,091.70	18,410,615.62	2,043,805.42	20,458,512.75
Apr-22	3,060.89	13,772,480.65	1,528,915.23	15,304,456.77
May-22	3,378.11	15,199,810.24	1,687,366.42	16,890,554.77
Jun-22	3,031.10	13,638,424.51	1,514,033.35	15,155,488.95
Jul-22	3,756.24	16,901,198.01	1,876,241.45	18,781,195.70
Aug-22	4,240.97	19,082,264.03	2,118,366.68	21,204,871.69
Sep-22	3,308.73	14,887,620.12	1,652,709.47	16,543,638.32
	$ 42,591.52	$ 191,640,558.64	$ 21,274,465.84	$ 212,957,616.00

KENTUCKY POWER COMPANY
LEAD LAG STUDY
COLLECTIONS LAG

Month	Current (0-30) [1]	30 Days (30-60) [2]	60 Days (60-90) [3]	180 Days (90- 180) [4]	365 Days (180 - 365)	>365 Days	Total
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
October 2021	$ 6,345,681.02	$ 683,035.20	$ 235,054.90	$ 413,426.71			$ 7,677,197.83
November 2021	6,500,314.61	787,778.00	247,530.96	376,639.51			7,912,263.08
December 2021	6,065,183.35	786,845.48	304,556.76	413,444.91			7,570,030.50
January 2022	9,694,885.79	992,044.39	444,152.09	605,260.15			11,736,342.42
February 2022	11,049,253.88	1,798,052.56	345,982.42	513,512.77			13,706,801.63
March 2022	8,319,116.20	1,632,997.27	1,062,255.72	456,391.06			11,470,760.25
April 2022	6,599,047.74	1,315,546.19	749,533.40	1,144,659.24			9,808,786.57
May 2022	6,925,518.67	1,100,013.92	577,812.97	751,305.55			9,354,651.11
June 2022	6,993,405.22	995,994.99	463,066.23	727,103.17			9,179,569.61
July 2022	8,331,471.86	843,760.16	378,553.65	490,790.69			10,044,576.36
August 2022	8,758,192.36	1,106,117.06	371,923.25	537,607.90			10,773,840.57
September 2022	8,870,816.06	1,265,589.65	437,215.56	485,272.11			11,058,893.38
	$ 94,452,886.76	$ 13,307,774.87	$ 5,617,637.91	$ 6,915,413.77	$ -	$ -	$ 120,293,713.31
Weighted Average	78.52%	11.06%	4.67%	5.75%	0.00%	0.00%	
Midpoint of Range	21	45	75	135	272.5	365	
Weighted Days	16.49	4.98	3.50	7.76	-	-	32.73

KENTUCKY POWER COMPANY
LEAD LAG STUDY
FUEL PURCHASES

Weighted Lead Time: 23.00 days

Vendor Name	Invoice Amount	Payment Method	Period Beginning	Period End	Payment Date	Service Lead Time	Payment Lead Time	Total Lead Time	Weighting Factor	Dollar-Weighted Days
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
ALPHA THERMAL COAL SALES COMPANY	$ 806,035.45	EFT	9/28/2021	10/8/2021	10/18/2021	5.50	10.00	15.50	0.582%	0.09
ALPHA THERMAL COAL SALES COMPANY	382,361.30	EFT	9/28/2021	10/8/2021	10/18/2021	5.50	10.00	15.50	0.276%	0.04
ALPHA THERMAL COAL SALES COMPANY	2,029,895.03	EFT	10/14/2021	10/23/2021	11/1/2021	5.00	9.00	14.00	1.465%	0.21
ALPHA THERMAL COAL SALES COMPANY	204,261.40	EFT	10/14/2021	10/23/2021	11/1/2021	5.00	9.00	14.00	0.147%	0.02
ALPHA THERMAL COAL SALES COMPANY	812,899.95	EFT	10/21/2021	10/27/2021	11/16/2021	3.50	20.00	23.50	0.587%	0.14
ALPHA THERMAL COAL SALES COMPANY	681,431.81	EFT	11/9/2021	11/14/2021	11/30/2021	3.00	16.00	19.00	0.492%	0.09
ALPHA THERMAL COAL SALES COMPANY	189,621.42	EFT	11/9/2021	11/14/2021	11/30/2021	3.00	16.00	19.00	0.137%	0.03
ALPHA THERMAL COAL SALES COMPANY	1,128,192.06	EFT	11/19/2021	11/30/2021	12/15/2021	6.00	15.00	21.00	0.814%	0.17
ALPHA THERMAL COAL SALES COMPANY	302,152.44	EFT	11/19/2021	11/30/2021	12/15/2021	6.00	15.00	21.00	0.218%	0.05
ALPHA THERMAL COAL SALES COMPANY	281,856.13	EFT	12/8/2021	12/27/2021	12/27/2021	10.00	-	10.00	0.203%	0.02
ALPHA THERMAL COAL SALES COMPANY	288,539.95	EFT	12/8/2021	12/27/2021	12/27/2021	10.00	-	10.00	0.208%	0.02
ALPHA THERMAL COAL SALES COMPANY	469,346.19	EFT	12/30/2021	1/9/2022	1/18/2022	5.50	9.00	14.50	0.339%	0.05
ALPHA THERMAL COAL SALES COMPANY	850,389.40	EFT	1/12/2022	1/19/2022	2/1/2022	4.00	13.00	17.00	0.614%	0.10
ALPHA THERMAL COAL SALES COMPANY	16,780.94	EFT	1/12/2022	1/19/2022	2/1/2022	4.00	13.00	17.00	0.012%	0.00
ALPHA THERMAL COAL SALES COMPANY	472,407.88	EFT	1/25/2022	2/2/2022	2/16/2022	4.50	14.00	18.50	0.341%	0.06
ALPHA THERMAL COAL SALES COMPANY	657,064.51	EFT	2/15/2022	3/1/2022	3/1/2022	7.50	-	7.50	0.474%	0.04
ALPHA THERMAL COAL SALES COMPANY	480,373.68	EFT	2/15/2022	3/1/2022	3/1/2022	7.50	-	7.50	0.347%	0.03
ALPHA THERMAL COAL SALES COMPANY	737,313.73	EFT	3/15/2022	3/23/2022	3/30/2022	4.50	7.00	11.50	0.532%	0.06
ALPHA THERMAL COAL SALES COMPANY	127,715.85	EFT	3/15/2022	3/23/2022	3/30/2022	4.50	7.00	11.50	0.092%	0.01
ALPHA THERMAL COAL SALES COMPANY	101,611.31	EFT	3/28/2022	4/6/2022	4/18/2022	5.00	12.00	17.00	0.073%	0.01
ALPHA THERMAL COAL SALES COMPANY	383,337.11	EFT	3/28/2022	4/4/2022	4/14/2022	4.00	10.00	14.00	0.277%	0.04
ALPHA THERMAL COAL SALES COMPANY	882,177.71	EFT	3/28/2022	4/4/2022	4/14/2022	4.00	10.00	14.00	0.636%	0.09
ALPHA THERMAL COAL SALES COMPANY	608,755.59	EFT	4/13/2022	4/19/2022	5/2/2022	3.50	13.00	16.50	0.439%	0.07
ALPHA THERMAL COAL SALES COMPANY	176,717.05	EFT	4/18/2022	4/27/2022	5/18/2022	5.00	21.00	26.00	0.128%	0.03
ALPHA THERMAL COAL SALES COMPANY	359,452.27	EFT	4/26/2022	5/6/2022	5/18/2022	5.50	12.00	17.50	0.259%	0.05
ALPHA THERMAL COAL SALES COMPANY	1,083,041.38	EFT	4/26/2022	5/6/2022	5/18/2022	5.50	12.00	17.50	0.781%	0.14
ALPHA THERMAL COAL SALES COMPANY	553,856.52	EFT	5/2/2022	5/12/2022	5/31/2022	5.50	19.00	24.50	0.400%	0.10
ALPHA THERMAL COAL SALES COMPANY	466,334.96	EFT	5/26/2022	6/2/2022	6/16/2022	4.00	14.00	18.00	0.336%	0.06
ALPHA THERMAL COAL SALES COMPANY	1,204,841.12	EFT	5/26/2022	6/2/2022	6/16/2022	4.00	14.00	18.00	0.869%	0.16
ALPHA THERMAL COAL SALES COMPANY	1,300,576.71	EFT	6/15/2022	6/23/2022	6/30/2022	4.50	7.00	11.50	0.938%	0.11
ALPHA THERMAL COAL SALES COMPANY	1,119,160.90	EFT	6/15/2022	6/23/2022	6/30/2022	4.50	7.00	11.50	0.807%	0.09
ALPHA THERMAL COAL SALES COMPANY	371,874.35	EFT	6/30/2022	7/18/2022	7/15/2022	9.50	(3.00)	6.50	0.268%	0.02
ALPHA THERMAL COAL SALES COMPANY	1,044,326.97	EFT	6/30/2022	7/18/2022	7/15/2022	9.50	(3.00)	6.50	0.753%	0.05
ALPHA THERMAL COAL SALES COMPANY	185,351.97	EFT	7/13/2022	7/19/2022	8/1/2022	3.50	13.00	16.50	0.134%	0.02
ALPHA THERMAL COAL SALES COMPANY	99,890.19	EFT	7/13/2022	7/19/2022	8/1/2022	3.50	13.00	16.50	0.072%	0.01
ALPHA THERMAL COAL SALES COMPANY	1,358,616.28	EFT	7/27/2022	8/3/2022	8/16/2022	4.00	13.00	17.00	0.980%	0.17
ALPHA THERMAL COAL SALES COMPANY	874,998.04	EFT	8/11/2022	8/18/2022	8/30/2022	4.00	12.00	16.00	0.631%	0.10
ALPHA THERMAL COAL SALES COMPANY	1,247,702.40	EFT	8/25/2022	9/6/2022	9/16/2022	6.50	10.00	16.50	0.900%	0.15
ALPHA THERMAL COAL SALES COMPANY	16,532.23	EFT	8/25/2022	9/6/2022	9/20/2022	6.50	14.00	20.50	0.012%	0.00
ALPHA THERMAL COAL SALES COMPANY	(0.17)	EFT	8/25/2022	9/6/2022	9/20/2022	6.50	14.00	20.50	0.000%	(0.00)
ALPHA THERMAL COAL SALES COMPANY	801,359.97	EFT	8/24/2022	9/1/2022	9/16/2022	4.50	15.00	19.50	0.578%	0.11
ALPHA THERMAL COAL SALES COMPANY	1,051,422.73	EFT	9/15/2022	9/28/2022	9/30/2022	7.00	2.00	9.00	0.759%	0.07
ALPHA THERMAL COAL SALES COMPANY	261,528.90	EFT	9/15/2022	9/28/2022	9/30/2022	7.00	2.00	9.00	0.189%	0.02
AMERICAN CONSOLIDATED NATURAL	(9,504.85)	EFT	9/30/2021	9/30/2021	10/15/2021	0.50	15.00	15.50	-0.007%	(0.00)
AMERICAN CONSOLIDATED NATURAL	2,931,954.74	EFT	9/30/2021	9/30/2021	10/15/2021	0.50	15.00	15.50	2.115%	0.33
AMERICAN CONSOLIDATED NATURAL	(6,904.33)	EFT	10/15/2021	10/15/2021	11/1/2021	0.50	17.00	17.50	-0.005%	(0.00)
AMERICAN CONSOLIDATED NATURAL	2,079,281.60	EFT	10/15/2021	10/15/2021	11/1/2021	0.50	17.00	17.50	1.500%	0.26
AMERICAN CONSOLIDATED NATURAL	(14,606.99)	EFT	10/31/2021	10/31/2021	11/16/2021	0.50	16.00	16.50	-0.011%	(0.00)
AMERICAN CONSOLIDATED NATURAL	2,799,903.59	EFT	10/31/2021	10/31/2021	11/16/2021	0.50	16.00	16.50	2.020%	0.33
AMERICAN CONSOLIDATED NATURAL	(8,336.13)	EFT	11/15/2021	11/15/2021	11/30/2021	0.50	15.00	15.50	-0.006%	(0.00)
AMERICAN CONSOLIDATED NATURAL	958,733.27	EFT	11/15/2021	11/15/2021	11/30/2021	0.50	15.00	15.50	0.692%	0.11
AMERICAN CONSOLIDATED NATURAL	(10,579.22)	EFT	11/21/2021	11/21/2021	12/15/2021	0.50	24.00	24.50	-0.008%	(0.00)
AMERICAN CONSOLIDATED NATURAL	1,286,974.70	EFT	11/21/2021	11/21/2021	12/15/2021	0.50	24.00	24.50	0.929%	0.23
AMERICAN CONSOLIDATED NATURAL	8,947.27	EFT	12/15/2021	12/15/2021	12/29/2021	0.50	14.00	14.50	0.006%	0.00
AMERICAN CONSOLIDATED NATURAL	3,328,108.19	EFT	12/15/2021	12/15/2021	12/29/2021	0.50	14.00	14.50	2.401%	0.35
AMERICAN CONSOLIDATED NATURAL	81,402.95	EFT	12/3/2021	12/6/2021	12/29/2021	2.00	23.00	25.00	0.059%	0.01
AMERICAN CONSOLIDATED NATURAL	(485,110.83)	EFT	12/3/2021	12/7/2021	1/17/2022	2.50	41.00	43.50	-0.350%	(0.15)
AMERICAN CONSOLIDATED NATURAL	81,947.17	EFT	12/3/2021	12/7/2021	1/17/2022	2.50	41.00	43.50	0.059%	0.03
AMERICAN CONSOLIDATED NATURAL	(28,336.55)	EFT	12/31/2021	12/31/2021	1/17/2022	0.50	17.00	17.50	-0.020%	(0.00)
AMERICAN CONSOLIDATED NATURAL	2,800,322.80	EFT	12/31/2021	12/31/2021	1/17/2022	0.50	17.00	17.50	2.020%	0.35
AMERICAN CONSOLIDATED NATURAL	(7,495.30)	EFT	1/15/2022	1/15/2022	2/1/2022	0.50	17.00	17.50	-0.005%	(0.00)
AMERICAN CONSOLIDATED NATURAL	3,032,565.14	EFT	1/15/2022	1/15/2022	2/1/2022	0.50	17.00	17.50	2.188%	0.38
AMERICAN CONSOLIDATED NATURAL	(1,494.89)	EFT	1/31/2022	1/31/2022	2/16/2022	0.50	16.00	16.50	-0.001%	(0.00)
AMERICAN CONSOLIDATED NATURAL	3,149,105.52	EFT	1/31/2022	1/31/2022	2/16/2022	0.50	16.00	16.50	2.272%	0.37
AMERICAN CONSOLIDATED NATURAL	113,142.79	EFT	2/15/2022	2/15/2022	3/2/2022	0.50	15.00	15.50	0.082%	0.01
AMERICAN CONSOLIDATED NATURAL	696,727.02	EFT	2/15/2022	2/15/2022	3/2/2022	0.50	15.00	15.50	0.503%	0.08
AMERICAN CONSOLIDATED NATURAL	(579.55)	EFT	2/28/2022	2/28/2022	3/15/2022	0.50	15.00	15.50	0.000%	(0.00)
AMERICAN CONSOLIDATED NATURAL	3,681,083.01	EFT	2/28/2022	2/28/2022	3/15/2022	0.50	15.00	15.50	2.656%	0.41
AMERICAN CONSOLIDATED NATURAL	(648.23)	EFT	3/12/2022	3/12/2022	3/30/2022	0.50	18.00	18.50	0.000%	(0.00)
AMERICAN CONSOLIDATED NATURAL	1,637,015.05	EFT	3/12/2022	3/12/2022	3/30/2022	0.50	18.00	18.50	1.181%	0.22
AMERICAN CONSOLIDATED NATURAL	14,564.73	EFT	3/31/2022	3/31/2022	4/14/2022	0.50	14.00	14.50	0.011%	0.00
AMERICAN CONSOLIDATED NATURAL	4,725,754.33	EFT	3/31/2022	3/31/2022	4/14/2022	0.50	14.00	14.50	3.410%	0.49
AMERICAN CONSOLIDATED NATURAL	(11,152.67)	EFT	4/12/2022	4/12/2022	5/2/2022	0.50	20.00	20.50	-0.008%	(0.00)
AMERICAN CONSOLIDATED NATURAL	1,237,507.92	EFT	4/12/2022	4/12/2022	5/2/2022	0.50	20.00	20.50	0.893%	0.18
AMERICAN CONSOLIDATED NATURAL	(4,737.34)	EFT	4/30/2022	4/30/2022	5/17/2022	0.50	17.00	17.50	-0.003%	(0.00)
AMERICAN CONSOLIDATED NATURAL	1,198,681.53	EFT	4/30/2022	4/30/2022	5/17/2022	0.50	17.00	17.50	0.865%	0.15
AMERICAN CONSOLIDATED NATURAL	(11,950.88)	EFT	5/9/2022	5/9/2022	5/31/2022	0.50	22.00	22.50	-0.009%	(0.00)
AMERICAN CONSOLIDATED NATURAL	1,111,680.09	EFT	5/9/2022	5/9/2022	5/31/2022	0.50	22.00	22.50	0.802%	0.18
AMERICAN CONSOLIDATED NATURAL	(109,486.08)	EFT	5/22/2022	5/22/2022	6/16/2022	0.50	25.00	25.50	-0.079%	(0.02)
AMERICAN CONSOLIDATED NATURAL	312,619.99	EFT	5/22/2022	5/22/2022	6/16/2022	0.50	25.00	25.50	0.226%	0.06
AMERICAN CONSOLIDATED NATURAL	(7,009.94)	EFT	6/14/2022	6/14/2022	6/30/2022	0.50	16.00	16.50	-0.005%	(0.00)
AMERICAN CONSOLIDATED NATURAL	953,591.34	EFT	6/14/2022	6/14/2022	6/30/2022	0.50	16.00	16.50	0.688%	0.11
AMERICAN CONSOLIDATED NATURAL	(12,318.08)	EFT	6/30/2022	6/30/2022	7/15/2022	0.50	15.00	15.50	-0.009%	(0.00)
AMERICAN CONSOLIDATED NATURAL	1,025,679.81	EFT	6/30/2022	6/30/2022	7/15/2022	0.50	15.00	15.50	0.740%	0.11
AMERICAN CONSOLIDATED NATURAL	(18,198.12)	EFT	7/15/2022	7/15/2022	8/1/2022	0.50	17.00	17.50	-0.013%	(0.00)
AMERICAN CONSOLIDATED NATURAL	1,217,915.73	EFT	7/15/2022	7/15/2022	8/1/2022	0.50	17.00	17.50	0.879%	0.15
AMERICAN CONSOLIDATED NATURAL	(9,560.02)	EFT	7/30/2022	7/30/2022	8/17/2022	0.50	18.00	18.50	-0.007%	(0.00)
AMERICAN CONSOLIDATED NATURAL	1,679,956.45	EFT	7/30/2022	7/30/2022	8/17/2022	0.50	18.00	18.50	1.212%	0.22
AMERICAN CONSOLIDATED NATURAL	731,390.64	EFT	8/15/2022	8/15/2022	8/30/2022	0.50	15.00	15.50	0.528%	0.08
AMERICAN CONSOLIDATED NATURAL	779,061.36	EFT	8/15/2022	8/15/2022	8/30/2022	0.50	15.00	15.50	0.562%	0.09
AMERICAN CONSOLIDATED NATURAL	(19,154.70)	EFT	8/31/2022	8/31/2022	9/16/2022	0.50	16.00	16.50	-0.014%	(0.00)
AMERICAN CONSOLIDATED NATURAL	3,616,227.46	EFT	8/31/2022	8/31/2022	9/16/2022	0.50	16.00	16.50	2.609%	0.43

Vendor Name	Invoice Amount	Payment Method	Period Beginning	Period End	Payment Date	Service Lead Time	Payment Lead Time	Total Lead Time	Weighting Factor	Dollar-Weighted Days
AMERICAN CONSOLIDATED NATURAL	(3,247.80)	EFT	9/15/2022	9/15/2022	9/30/2022	0.50	15.00	15.50	-0.002%	(0.00)
AMERICAN CONSOLIDATED NATURAL	2,281,958.41	EFT	9/15/2022	9/15/2022	9/30/2022	0.50	15.00	15.50	1.646%	0.26
BAMM INC	108,057.16	EFT	1/13/2022	2/3/2022	2/11/2022	11.00	8.00	19.00	0.078%	0.01
BLACKHAWK COAL SALES LLC	266,770.80	EFT	1/11/2022	1/18/2022	2/16/2022	4.00	29.00	33.00	0.192%	0.06
BLACKHAWK COAL SALES LLC	99,597.60	EFT	1/11/2022	1/18/2022	2/16/2022	4.00	29.00	33.00	0.072%	0.02
BLACKHAWK COAL SALES LLC	(5,251.28)	EFT	1/11/2022	1/18/2022	2/24/2022	4.00	37.00	41.00	-0.004%	(0.00)
BLACKHAWK COAL SALES LLC	89,764.74	EFT	2/9/2022	2/15/2022	3/2/2022	3.50	15.00	18.50	0.065%	0.01
BLACKHAWK COAL SALES LLC	360,428.86	EFT	2/9/2022	2/15/2022	3/2/2022	3.50	15.00	18.50	0.260%	0.05
BLACKHAWK COAL SALES LLC	175,218.13	EFT	3/25/2022	4/5/2022	4/18/2022	6.00	13.00	19.00	0.126%	0.02
BLACKHAWK COAL SALES LLC	171,126.00	EFT	3/25/2022	4/5/2022	4/18/2022	6.00	13.00	19.00	0.123%	0.02
BLACKHAWK COAL SALES LLC	(1,692.14)	EFT	3/25/2022	4/5/2022	4/27/2022	6.00	22.00	28.00	-0.001%	(0.00)
BLACKHAWK COAL SALES LLC	(713.03)	EFT	3/25/2022	4/5/2022	4/27/2022	6.00	22.00	28.00	-0.001%	(0.00)
BLACKHAWK COAL SALES LLC	362,103.02	EFT	4/7/2022	4/20/2022	5/2/2022	7.00	12.00	19.00	0.261%	0.05
BLACKHAWK COAL SALES LLC	435,970.30	EFT	5/25/2022	6/7/2022	6/16/2022	7.00	9.00	16.00	0.315%	0.05
BLACKHAWK COAL SALES LLC	416,131.43	EFT	5/25/2022	6/2/2022	6/16/2022	4.50	14.00	18.50	0.300%	0.06
BLACKHAWK COAL SALES LLC	282,398.33	EFT	5/25/2022	6/2/2022	6/16/2022	4.50	14.00	18.50	0.204%	0.04
BLACKHAWK COAL SALES LLC	367,356.77	EFT	6/27/2022	7/6/2022	7/15/2022	5.00	9.00	14.00	0.265%	0.04
BLACKHAWK COAL SALES LLC	587,835.71	EFT	6/24/2022	7/15/2022	7/18/2022	11.00	3.00	14.00	0.424%	0.06
BLACKHAWK COAL SALES LLC	149,907.07	EFT	6/24/2022	7/15/2022	7/18/2022	11.00	3.00	14.00	0.108%	0.02
BLACKHAWK COAL SALES LLC	87,534.50	EFT	7/14/2022	7/20/2022	8/1/2022	3.50	12.00	15.50	0.063%	0.01
BLACKHAWK COAL SALES LLC	271,564.62	EFT	7/14/2022	7/20/2022	8/1/2022	3.50	12.00	15.50	0.196%	0.03
BLACKHAWK COAL SALES LLC	401,862.03	EFT	7/14/2022	7/20/2022	8/1/2022	3.50	12.00	15.50	0.290%	0.04
BLACKHAWK COAL SALES LLC	277,382.62	EFT	7/14/2022	7/20/2022	8/1/2022	3.50	12.00	15.50	0.200%	0.03
BLACKHAWK COAL SALES LLC	363,054.45	EFT	8/4/2022	8/10/2022	8/31/2022	3.50	21.00	24.50	0.262%	0.06
BLACKHAWK COAL SALES LLC	676,420.15	EFT	8/4/2022	8/9/2022	8/31/2022	3.00	22.00	25.00	0.488%	0.12
BLACKHAWK COAL SALES LLC	543,082.37	EFT	9/17/2021	9/28/2021	10/15/2021	6.00	17.00	23.00	0.392%	0.09
BLACKHAWK COAL SALES LLC	644,792.82	EFT	10/13/2021	10/28/2021	11/1/2021	8.00	4.00	12.00	0.465%	0.06
BLACKHAWK COAL SALES LLC	223,059.37	EFT	10/13/2021	10/28/2021	11/1/2021	8.00	4.00	12.00	0.161%	0.02
BLACKHAWK COAL SALES LLC	524,129.64	EFT	11/10/2021	11/24/2021	11/30/2021	7.50	6.00	13.50	0.378%	0.05
BLACKHAWK COAL SALES LLC	307,354.67	EFT	11/10/2021	11/24/2021	11/30/2021	7.50	6.00	13.50	0.222%	0.03
BLACKHAWK COAL SALES LLC	529,110.49	EFT	12/14/2021	12/22/2021	12/29/2021	4.50	7.00	11.50	0.382%	0.04
BLACKHAWK COAL SALES LLC	110,762.47	EFT	12/27/2021	1/10/2022	1/17/2022	7.50	7.00	14.50	0.080%	0.01
BLACKHAWK COAL SALES LLC	113,585.62	EFT	12/27/2021	1/10/2022	1/17/2022	7.50	7.00	14.50	0.082%	0.01
CASE COAL SALES LLC	130,751.10	EFT	3/11/2022	3/23/2022	3/31/2022	6.50	8.00	14.50	0.094%	0.01
CASE COAL SALES LLC	149,278.18	EFT	4/13/2022	4/26/2022	5/2/2022	7.00	6.00	13.00	0.108%	0.01
CASE COAL SALES LLC	258,218.02	EFT	4/19/2022	4/24/2022	5/18/2022	3.00	24.00	27.00	0.186%	0.05
CASE COAL SALES LLC	270,150.06	EFT	6/7/2022	6/22/2022	6/30/2022	8.00	8.00	16.00	0.195%	0.03
CASE COAL SALES LLC	140,740.32	EFT	6/23/2022	6/28/2022	7/15/2022	3.00	17.00	20.00	0.102%	0.02
CASE COAL SALES LLC	139,874.01	EFT	7/7/2022	7/19/2022	8/8/2022	6.50	20.00	26.50	0.101%	0.03
CASE COAL SALES LLC	146,397.26	EFT	8/12/2022	9/6/2022	9/6/2022	13.00	-	13.00	0.106%	0.01
CASE COAL SALES LLC	141,287.12	EFT	9/8/2022	9/27/2022	9/30/2022	10.00	3.00	13.00	0.102%	0.01
JAVELIN GLOBAL COMMODITIES	321,117.39	WIR	2/15/2022	3/1/2022	3/15/2022	7.50	14.00	21.50	0.232%	0.05
JAVELIN GLOBAL COMMODITIES	207,622.17	WIR	2/15/2022	3/1/2022	3/15/2022	7.50	14.00	21.50	0.150%	0.03
RFI RESOURCES LLC	135,753.78	EFT	2/24/2022	3/22/2022	3/18/2022	13.50	(4.00)	9.50	0.098%	0.01
RFI RESOURCES LLC	136,237.48	EFT	3/7/2022	3/22/2022	4/11/2022	8.00	20.00	28.00	0.098%	0.03
RFI RESOURCES LLC	139,892.87	EFT	3/25/2022	4/2/2022	4/18/2022	4.50	16.00	20.50	0.101%	0.02
RFI RESOURCES LLC	135,476.69	EFT	3/25/2022	4/2/2022	4/18/2022	4.50	16.00	20.50	0.098%	0.02
RFI RESOURCES LLC	(4,517.30)	EFT	3/25/2022	4/2/2022	4/27/2022	4.50	25.00	29.50	-0.003%	(0.00)
RFI RESOURCES LLC	419,938.49	EFT	4/14/2022	4/26/2022	5/2/2022	6.50	6.00	12.50	0.303%	0.04
RFI RESOURCES LLC	2,449.80	EFT	4/14/2022	4/26/2022	5/19/2022	6.50	23.00	29.50	0.002%	0.00
RFI RESOURCES LLC	135,843.37	EFT	4/29/2022	5/10/2022	5/19/2022	6.00	9.00	15.00	0.098%	0.01
RFI RESOURCES LLC	280,111.48	EFT	4/29/2022	5/10/2022	5/19/2022	6.00	9.00	15.00	0.202%	0.03
RFI RESOURCES LLC	582.23	EFT	4/29/2022	5/10/2022	5/19/2022	6.00	9.00	15.00	0.000%	0.00
RFI RESOURCES LLC	130,878.78	EFT	5/5/2022	5/18/2022	5/31/2022	7.00	13.00	20.00	0.094%	0.02
RFI RESOURCES LLC	143,024.86	EFT	5/17/2022	5/26/2022	6/16/2022	5.00	21.00	26.00	0.103%	0.03
RFI RESOURCES LLC	267,333.56	EFT	6/10/2022	6/30/2022	6/21/2022	10.50	(9.00)	1.50	0.193%	0.00
RFI RESOURCES LLC	137,045.14	EFT	6/30/2022	7/18/2022	7/14/2022	9.50	(4.00)	5.50	0.099%	0.01
RFI RESOURCES LLC	257,465.47	EFT	6/30/2022	7/18/2022	7/14/2022	9.50	(4.00)	5.50	0.186%	0.01
RIVER TRADING COMPANY	3,457.69	EFT	4/20/2022	5/10/2022	5/23/2022	10.50	13.00	23.50	0.002%	0.00
RIVER TRADING COMPANY	267,718.64	EFT	4/20/2022	5/10/2022	5/23/2022	10.50	13.00	23.50	0.193%	0.05
RIVER TRADING COMPANY	408,653.90	EFT	5/23/2022	6/1/2022	6/16/2022	5.00	15.00	20.00	0.295%	0.06
RIVER TRADING COMPANY	274,437.33	EFT	5/23/2022	6/1/2022	6/16/2022	5.00	15.00	20.00	0.198%	0.04
RIVER TRADING COMPANY	17,864.05	EFT	5/23/2022	6/1/2022	6/29/2022	5.00	28.00	33.00	0.013%	0.00
RIVER TRADING COMPANY	437,439.16	EFT	6/24/2022	7/1/2022	7/18/2022	4.00	17.00	21.00	0.316%	0.07
RIVER TRADING COMPANY	158,384.95	EFT	6/24/2022	7/1/2022	7/18/2022	4.00	17.00	21.00	0.114%	0.02
RIVER TRADING COMPANY	278,110.76	EFT	8/19/2022	9/7/2022	9/16/2022	10.00	9.00	19.00	0.201%	0.04
PILOT TRAVEL CENTERS LLC	18,793.34	EFT	9/29/2021	9/29/2021	10/8/2021	0.50	9.00	9.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	18,800.86	EFT	9/29/2021	9/29/2021	10/8/2021	0.50	9.00	9.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	18,790.84	EFT	9/29/2021	9/29/2021	10/8/2021	0.50	9.00	9.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	18,788.33	EFT	9/29/2021	9/29/2021	10/8/2021	0.50	9.00	9.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	18,927.18	EFT	9/30/2021	9/30/2021	10/11/2021	0.50	11.00	11.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	18,932.23	EFT	9/30/2021	9/30/2021	10/11/2021	0.50	11.00	11.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	18,924.66	EFT	9/30/2021	9/30/2021	10/11/2021	0.50	11.00	11.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	18,922.14	EFT	9/30/2021	9/30/2021	10/11/2021	0.50	11.00	11.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	19,117.22	EFT	10/1/2021	10/1/2021	10/11/2021	0.50	10.00	10.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	19,114.67	EFT	10/1/2021	10/1/2021	10/11/2021	0.50	10.00	10.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	19,117.22	EFT	10/1/2021	10/1/2021	10/11/2021	0.50	10.00	10.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	19,132.51	EFT	10/1/2021	10/1/2021	10/11/2021	0.50	10.00	10.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	19,459.76	EFT	10/4/2021	10/4/2021	10/11/2021	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	19,464.95	EFT	10/4/2021	10/4/2021	10/11/2021	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	19,464.95	EFT	10/4/2021	10/4/2021	10/11/2021	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	19,457.16	EFT	10/4/2021	10/4/2021	10/11/2021	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	19,920.04	EFT	10/5/2021	10/5/2021	10/12/2021	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	19,917.38	EFT	10/5/2021	10/5/2021	10/12/2021	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	19,933.32	EFT	10/5/2021	10/5/2021	10/12/2021	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	19,917.38	EFT	10/5/2021	10/5/2021	10/12/2021	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	20,318.74	EFT	10/6/2021	10/6/2021	10/12/2021	0.50	6.00	6.50	0.015%	0.00
PILOT TRAVEL CENTERS LLC	20,321.45	EFT	10/6/2021	10/6/2021	10/12/2021	0.50	6.00	6.50	0.015%	0.00
PILOT TRAVEL CENTERS LLC	20,316.02	EFT	10/6/2021	10/6/2021	10/12/2021	0.50	6.00	6.50	0.015%	0.00
PILOT TRAVEL CENTERS LLC	20,313.32	EFT	10/6/2021	10/6/2021	10/12/2021	0.50	6.00	6.50	0.015%	0.00
PILOT TRAVEL CENTERS LLC	20,023.48	EFT	10/7/2021	10/7/2021	10/20/2021	0.50	13.00	13.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	20,050.19	EFT	10/7/2021	10/7/2021	10/20/2021	0.50	13.00	13.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	20,039.51	EFT	10/7/2021	10/7/2021	10/20/2021	0.50	13.00	13.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	20,020.82	EFT	10/7/2021	10/7/2021	10/20/2021	0.50	13.00	13.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	20,016.49	EFT	10/11/2021	10/11/2021	10/18/2021	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	20,027.17	EFT	10/11/2021	10/11/2021	10/18/2021	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	20,016.49	EFT	10/11/2021	10/11/2021	10/18/2021	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	20,011.15	EFT	10/11/2021	10/11/2021	10/18/2021	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	20,227.75	EFT	10/12/2021	10/12/2021	10/19/2021	0.50	7.00	7.50	0.015%	0.00
PILOT TRAVEL CENTERS LLC	20,219.68	EFT	10/12/2021	10/12/2021	10/19/2021	0.50	7.00	7.50	0.015%	0.00

Vendor Name	Invoice Amount	Payment Method	Period Beginning	Period End	Payment Date	Service Lead Time	Payment Lead Time	Total Lead Time	Weighting Factor	Dollar-Weighted Days
PILOT TRAVEL CENTERS LLC	20,230.45	EFT	10/12/2021	10/12/2021	10/19/2021	0.50	7.00	7.50	0.015%	0.00
PILOT TRAVEL CENTERS LLC	20,211.59	EFT	10/12/2021	10/12/2021	10/19/2021	0.50	7.00	7.50	0.015%	0.00
PILOT TRAVEL CENTERS LLC	21,165.54	EFT	11/10/2021	11/10/2021	11/16/2021	0.50	6.00	6.50	0.015%	0.00
PILOT TRAVEL CENTERS LLC	21,165.54	EFT	11/10/2021	11/10/2021	11/16/2021	0.50	6.00	6.50	0.015%	0.00
PILOT TRAVEL CENTERS LLC	20,884.17	EFT	11/11/2021	11/11/2021	11/16/2021	0.50	5.00	5.50	0.015%	0.00
PILOT TRAVEL CENTERS LLC	20,884.17	EFT	11/11/2021	11/11/2021	11/16/2021	0.50	5.00	5.50	0.015%	0.00
PILOT TRAVEL CENTERS LLC	20,928.23	EFT	11/12/2021	11/14/2021	11/17/2021	1.50	3.00	4.50	0.015%	0.00
PILOT TRAVEL CENTERS LLC	20,925.44	EFT	11/12/2021	11/14/2021	11/17/2021	1.50	3.00	4.50	0.015%	0.00
PILOT TRAVEL CENTERS LLC	20,928.23	EFT	11/12/2021	11/14/2021	11/19/2021	1.50	5.00	6.50	0.015%	0.00
PILOT TRAVEL CENTERS LLC	20,922.65	EFT	11/12/2021	11/14/2021	11/19/2021	1.50	5.00	6.50	0.015%	0.00
PILOT TRAVEL CENTERS LLC	18,779.57	EFT	12/6/2021	12/6/2021	12/13/2021	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	18,779.57	EFT	12/6/2021	12/6/2021	12/13/2021	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	19,162.07	EFT	12/7/2021	12/7/2021	12/14/2021	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	19,162.07	EFT	12/7/2021	12/7/2021	12/14/2021	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	18,685.80	EFT	11/30/2021	11/30/2021	12/9/2021	0.50	9.00	9.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	18,683.30	EFT	11/30/2021	11/30/2021	12/9/2021	0.50	9.00	9.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	19,297.07	EFT	12/8/2021	12/8/2021	12/15/2021	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	19,297.07	EFT	12/8/2021	12/8/2021	12/15/2021	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	18,415.82	EFT	12/1/2021	12/1/2021	12/10/2021	0.50	9.00	9.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	18,415.82	EFT	12/1/2021	12/1/2021	12/10/2021	0.50	9.00	9.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	19,154.57	EFT	12/9/2021	12/9/2021	12/15/2021	0.50	6.00	6.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	19,154.57	EFT	12/9/2021	12/9/2021	12/15/2021	0.50	6.00	6.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	18,723.32	EFT	12/2/2021	12/2/2021	12/10/2021	0.50	8.00	8.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	18,723.32	EFT	12/2/2021	12/2/2021	12/10/2021	0.50	8.00	8.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	18,637.07	EFT	12/10/2021	12/10/2021	12/15/2021	0.50	5.00	5.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	18,637.07	EFT	12/10/2021	12/10/2021	12/30/2021	0.50	20.00	20.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	20,869.17	EFT	11/17/2021	11/17/2021	12/10/2021	0.50	23.00	23.50	0.015%	0.00
PILOT TRAVEL CENTERS LLC	20,869.17	EFT	11/17/2021	11/17/2021	12/10/2021	0.50	23.00	23.50	0.015%	0.00
PILOT TRAVEL CENTERS LLC	20,758.58	EFT	11/16/2021	11/16/2021	12/10/2021	0.50	24.00	24.50	0.015%	0.00
PILOT TRAVEL CENTERS LLC	20,761.35	EFT	11/16/2021	11/16/2021	12/10/2021	0.50	24.00	24.50	0.015%	0.00
PILOT TRAVEL CENTERS LLC	17,838.32	EFT	12/15/2021	12/15/2021	12/22/2021	0.50	7.00	7.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	17,838.32	EFT	12/15/2021	12/15/2021	12/22/2021	0.50	7.00	7.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	17,924.57	EFT	12/16/2021	12/16/2021	12/22/2021	0.50	6.00	6.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	17,924.57	EFT	12/16/2021	12/16/2021	12/22/2021	0.50	6.00	6.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	18,138.32	EFT	12/17/2021	12/17/2021	12/22/2021	0.50	5.00	5.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	18,138.32	EFT	12/17/2021	12/17/2021	12/22/2021	0.50	5.00	5.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	17,714.57	EFT	12/20/2021	12/20/2021	12/29/2021	0.50	9.00	9.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	17,714.57	EFT	12/20/2021	12/20/2021	12/29/2021	0.50	9.00	9.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	17,433.32	EFT	12/21/2021	12/21/2021	12/29/2021	0.50	8.00	8.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	17,433.32	EFT	12/21/2021	12/21/2021	12/29/2021	0.50	8.00	8.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	17,962.07	EFT	12/22/2021	12/22/2021	12/29/2021	0.50	7.00	7.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	17,962.07	EFT	12/22/2021	12/22/2021	12/29/2021	0.50	7.00	7.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	18,082.07	EFT	12/23/2021	12/23/2021	12/29/2021	0.50	6.00	6.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	18,082.07	EFT	12/23/2021	12/23/2021	12/29/2021	0.50	6.00	6.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	18,224.57	EFT	12/27/2021	12/27/2021	1/3/2022	0.50	7.00	7.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	18,224.57	EFT	12/27/2021	12/27/2021	1/3/2022	0.50	7.00	7.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	18,374.57	EFT	12/28/2021	12/28/2021	1/4/2022	0.50	7.00	7.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	18,374.57	EFT	12/28/2021	12/28/2021	1/6/2022	0.50	9.00	9.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	18,374.57	EFT	12/28/2021	12/28/2021	1/4/2022	0.50	7.00	7.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	18,374.57	EFT	12/28/2021	12/28/2021	1/4/2022	0.50	7.00	7.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	18,475.82	EFT	12/29/2021	12/29/2021	1/10/2022	0.50	12.00	12.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	18,475.82	EFT	12/29/2021	12/29/2021	1/10/2022	0.50	12.00	12.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	18,475.82	EFT	12/29/2021	12/29/2021	1/10/2022	0.50	12.00	12.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	18,475.82	EFT	12/29/2021	12/29/2021	1/10/2022	0.50	12.00	12.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	18,494.57	EFT	12/30/2021	12/30/2021	1/10/2022	0.50	11.00	11.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	18,494.57	EFT	12/30/2021	12/30/2021	1/10/2022	0.50	11.00	11.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	18,494.57	EFT	12/30/2021	12/30/2021	1/10/2022	0.50	11.00	11.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	18,494.57	EFT	12/30/2021	12/30/2021	1/10/2022	0.50	11.00	11.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	18,269.57	EFT	1/3/2022	1/3/2022	1/11/2022	0.50	8.00	8.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	18,269.57	EFT	1/3/2022	1/3/2022	1/11/2022	0.50	8.00	8.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	18,269.57	EFT	1/3/2022	1/3/2022	1/11/2022	0.50	8.00	8.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	18,269.57	EFT	1/3/2022	1/3/2022	1/11/2022	0.50	8.00	8.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	18,337.07	EFT	1/4/2022	1/4/2022	1/12/2022	0.50	8.00	8.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	18,332.19	EFT	1/4/2022	1/4/2022	1/12/2022	0.50	8.00	8.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	18,341.96	EFT	1/4/2022	1/4/2022	1/12/2022	0.50	8.00	8.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	18,344.41	EFT	1/4/2022	1/4/2022	1/12/2022	0.50	8.00	8.50	0.013%	0.00
PILOT TRAVEL CENTERS LLC	18,734.57	EFT	1/5/2022	1/5/2022	1/12/2022	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	18,734.57	EFT	1/5/2022	1/5/2022	1/12/2022	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	18,734.57	EFT	1/5/2022	1/5/2022	1/12/2022	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	18,734.57	EFT	1/5/2022	1/5/2022	1/12/2022	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	18,938.30	EFT	1/6/2022	1/6/2022	1/12/2022	0.50	6.00	6.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	18,943.34	EFT	1/6/2022	1/6/2022	1/12/2022	0.50	6.00	6.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	18,943.34	EFT	1/6/2022	1/6/2022	1/12/2022	0.50	6.00	6.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	18,940.82	EFT	1/6/2022	1/6/2022	1/12/2022	0.50	6.00	6.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	19,387.07	EFT	1/12/2022	1/12/2022	1/19/2022	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	19,387.07	EFT	1/12/2022	1/12/2022	1/19/2022	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	19,387.07	EFT	1/12/2022	1/12/2022	1/19/2022	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	19,387.07	EFT	1/12/2022	1/12/2022	1/19/2022	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	19,005.89	EFT	1/10/2022	1/10/2022	1/17/2022	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	19,000.82	EFT	1/10/2022	1/10/2022	1/17/2022	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	19,444.48	EFT	1/13/2022	1/13/2022	1/19/2022	0.50	6.00	6.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	19,441.89	EFT	1/13/2022	1/13/2022	1/19/2022	0.50	6.00	6.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	18,848.31	EFT	1/11/2022	1/11/2022	1/18/2022	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	18,855.85	EFT	1/11/2022	1/11/2022	1/18/2022	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	18,845.80	EFT	1/11/2022	1/11/2022	1/18/2022	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	18,853.33	EFT	1/11/2022	1/11/2022	1/18/2022	0.50	7.00	7.50	0.014%	0.00
PILOT TRAVEL CENTERS LLC	28,174.82	EFT	8/15/2022	8/15/2022	9/19/2022	0.50	35.00	35.50	0.020%	0.01
SARATOGA RACK MARKETING LLC	21,273.32	EFT	2/1/2022	2/1/2022	2/23/2022	0.50	22.00	22.50	0.015%	0.00
SARATOGA RACK MARKETING LLC	21,867.47	EFT	2/3/2022	2/3/2022	2/23/2022	0.50	20.00	20.50	0.016%	0.00
SARATOGA RACK MARKETING LLC	21,852.90	EFT	2/3/2022	2/3/2022	2/23/2022	0.50	20.00	20.50	0.016%	0.00
SARATOGA RACK MARKETING LLC	21,603.58	EFT	2/2/2022	2/2/2022	2/23/2022	0.50	21.00	21.50	0.016%	0.00
SARATOGA RACK MARKETING LLC	21,281.83	EFT	2/1/2022	2/1/2022	2/23/2022	0.50	22.00	22.50	0.015%	0.00
SARATOGA RACK MARKETING LLC	21,276.15	EFT	2/1/2022	2/1/2022	2/23/2022	0.50	22.00	22.50	0.015%	0.00
SARATOGA RACK MARKETING LLC	21,290.35	EFT	2/1/2022	2/1/2022	2/23/2022	0.50	22.00	22.50	0.015%	0.00
SARATOGA RACK MARKETING LLC	21,606.47	EFT	2/2/2022	2/2/2022	2/23/2022	0.50	21.00	21.50	0.016%	0.00
SARATOGA RACK MARKETING LLC	21,609.35	EFT	2/2/2022	2/21/2022	2/23/2022	10.00	2.00	12.00	0.016%	0.00
SARATOGA RACK MARKETING LLC	22,308.32	EFT	2/8/2022	2/8/2022	2/23/2022	0.50	15.00	15.50	0.016%	0.00
SARATOGA RACK MARKETING LLC	22,305.35	EFT	2/8/2022	2/8/2022	2/23/2022	0.50	15.00	15.50	0.016%	0.00
SARATOGA RACK MARKETING LLC	22,332.13	EFT	2/8/2022	2/8/2022	2/23/2022	0.50	15.00	15.50	0.016%	0.00
SARATOGA RACK MARKETING LLC	21,868.32	EFT	2/9/2022	2/9/2022	2/23/2022	0.50	14.00	14.50	0.016%	0.00

Vendor Name	Invoice Amount	Payment Method	Period Beginning	Period End	Payment Date	Service Lead Time	Payment Lead Time	Total Lead Time	Weighting Factor	Dollar-Weighted Days
SARATOGA RACK MARKETING LLC	21,879.98	EFT	2/9/2022	2/9/2022	2/23/2022	0.50	14.00	14.50	0.016%	0.00
SARATOGA RACK MARKETING LLC	22,078.97	EFT	2/10/2022	2/10/2022	2/23/2022	0.50	13.00	13.50	0.016%	0.00
SARATOGA RACK MARKETING LLC	22,064.28	EFT	2/10/2022	2/10/2022	2/23/2022	0.50	13.00	13.50	0.016%	0.00
SARATOGA RACK MARKETING LLC	22,070.15	EFT	2/10/2022	2/10/2022	2/23/2022	0.50	13.00	13.50	0.016%	0.00
SARATOGA RACK MARKETING LLC	22,055.45	EFT	2/10/2022	2/10/2022	2/23/2022	0.50	13.00	13.50	0.016%	0.00
SARATOGA RACK MARKETING LLC	22,570.82	EFT	2/17/2022	2/17/2022	2/28/2022	0.50	11.00	11.50	0.016%	0.00
SARATOGA RACK MARKETING LLC	22,570.82	EFT	2/17/2022	2/17/2022	2/28/2022	0.50	11.00	11.50	0.016%	0.00
SARATOGA RACK MARKETING LLC	22,594.91	EFT	2/17/2022	2/17/2022	2/28/2022	0.50	11.00	11.50	0.016%	0.00
SARATOGA RACK MARKETING LLC	23,640.33	EFT	2/28/2022	2/28/2022	3/11/2022	0.50	11.00	11.50	0.017%	0.00
SARATOGA RACK MARKETING LLC	23,956.09	EFT	2/25/2022	2/25/2022	3/11/2022	0.50	14.00	14.50	0.017%	0.00
SARATOGA RACK MARKETING LLC	25,564.32	EFT	3/2/2022	3/2/2022	3/14/2022	0.50	12.00	12.50	0.018%	0.00
SARATOGA RACK MARKETING LLC	25,547.29	EFT	3/2/2022	3/2/2022	3/14/2022	0.50	12.00	12.50	0.018%	0.00
SARATOGA RACK MARKETING LLC	25,537.07	EFT	3/2/2022	3/2/2022	3/14/2022	0.50	12.00	12.50	0.018%	0.00
SARATOGA RACK MARKETING LLC	24,467.82	EFT	3/1/2022	3/1/2022	3/14/2022	0.50	13.00	13.50	0.018%	0.00
SARATOGA RACK MARKETING LLC	23,649.78	EFT	2/28/2022	2/28/2022	3/14/2022	0.50	14.00	14.50	0.017%	0.00
SARATOGA RACK MARKETING LLC	23,624.57	EFT	2/28/2022	2/28/2022	3/14/2022	0.50	14.00	14.50	0.017%	0.00
SARATOGA RACK MARKETING LLC	23,649.76	EFT	2/28/2022	2/28/2022	3/24/2022	0.50	24.00	24.50	0.017%	0.00
SARATOGA RACK MARKETING LLC	24,484.15	EFT	3/1/2022	3/1/2022	3/14/2022	0.50	13.00	13.50	0.018%	0.00
SARATOGA RACK MARKETING LLC	23,649.78	EFT	2/28/2022	2/28/2022	3/24/2022	0.50	24.00	24.50	0.017%	0.00
SARATOGA RACK MARKETING LLC	23,044.35	EFT	2/22/2022	2/22/2022	3/16/2022	0.50	22.00	22.50	0.017%	0.00
SARATOGA RACK MARKETING LLC	23,041.29	EFT	2/22/2022	2/22/2022	3/16/2022	0.50	22.00	22.50	0.017%	0.00
SARATOGA RACK MARKETING LLC	23,032.07	EFT	2/22/2022	2/22/2022	3/16/2022	0.50	22.00	22.50	0.017%	0.00
SARATOGA RACK MARKETING LLC	23,035.13	EFT	2/22/2022	2/22/2022	3/16/2022	0.50	22.00	22.50	0.017%	0.00
SARATOGA RACK MARKETING LLC	23,358.25	EFT	2/23/2022	2/23/2022	3/16/2022	0.50	21.00	21.50	0.017%	0.00
SARATOGA RACK MARKETING LLC	23,348.91	EFT	2/23/2022	2/23/2022	3/16/2022	0.50	21.00	21.50	0.017%	0.00
SARATOGA RACK MARKETING LLC	23,342.67	EFT	2/23/2022	2/23/2022	3/16/2022	0.50	21.00	21.50	0.017%	0.00
SARATOGA RACK MARKETING LLC	23,345.80	EFT	2/23/2022	2/23/2022	3/17/2022	0.50	22.00	22.50	0.017%	0.00
SARATOGA RACK MARKETING LLC	23,402.68	EFT	2/24/2022	2/24/2022	3/17/2022	0.50	21.00	21.50	0.017%	0.00
SARATOGA RACK MARKETING LLC	23,399.57	EFT	2/24/2022	2/24/2022	3/17/2022	0.50	21.00	21.50	0.017%	0.00
SARATOGA RACK MARKETING LLC	23,412.05	EFT	2/24/2022	2/24/2022	3/16/2022	0.50	20.00	20.50	0.017%	0.00
SARATOGA RACK MARKETING LLC	23,956.09	EFT	2/25/2022	2/25/2022	3/16/2022	0.50	19.00	19.50	0.017%	0.00
SARATOGA RACK MARKETING LLC	28,154.57	EFT	3/17/2022	3/17/2022	3/28/2022	0.50	11.00	11.50	0.020%	0.00
SARATOGA RACK MARKETING LLC	27,652.07	EFT	3/16/2022	3/16/2022	3/28/2022	0.50	12.00	12.50	0.020%	0.00
SARATOGA RACK MARKETING LLC	27,652.07	EFT	3/16/2022	3/16/2022	3/28/2022	0.50	12.00	12.50	0.020%	0.00
SARATOGA RACK MARKETING LLC	27,652.07	EFT	3/16/2022	3/16/2022	3/28/2022	0.50	12.00	12.50	0.020%	0.00
SARATOGA RACK MARKETING LLC	28,158.32	EFT	3/17/2022	3/17/2022	3/28/2022	0.50	11.00	11.50	0.020%	0.00
SARATOGA RACK MARKETING LLC	27,652.07	EFT	3/16/2022	3/16/2022	3/28/2022	0.50	12.00	12.50	0.020%	0.00
SARATOGA RACK MARKETING LLC	28,188.37	EFT	3/17/2022	3/17/2022	3/28/2022	0.50	11.00	11.50	0.020%	0.00
SARATOGA RACK MARKETING LLC	28,162.07	EFT	3/17/2022	3/17/2022	3/28/2022	0.50	11.00	11.50	0.020%	0.00
SARATOGA RACK MARKETING LLC	28,417.30	EFT	4/6/2022	4/6/2022	4/13/2022	0.50	7.00	7.50	0.021%	0.00
SARATOGA RACK MARKETING LLC	28,390.79	EFT	4/6/2022	4/6/2022	4/13/2022	0.50	7.00	7.50	0.020%	0.00
SARATOGA RACK MARKETING LLC	28,402.15	EFT	4/6/2022	4/6/2022	4/13/2022	0.50	7.00	7.50	0.020%	0.00
SARATOGA RACK MARKETING LLC	28,398.35	EFT	4/6/2022	4/6/2022	4/13/2022	0.50	7.00	7.50	0.020%	0.00
SARATOGA RACK MARKETING LLC	29,006.17	EFT	4/5/2022	4/5/2022	4/21/2022	0.50	16.00	16.50	0.021%	0.00
SARATOGA RACK MARKETING LLC	29,010.03	EFT	4/5/2022	4/5/2022	4/21/2022	0.50	16.00	16.50	0.021%	0.00
SARATOGA RACK MARKETING LLC	28,998.43	EFT	4/5/2022	4/5/2022	4/21/2022	0.50	16.00	16.50	0.021%	0.00
SARATOGA RACK MARKETING LLC	28,998.43	EFT	4/5/2022	4/5/2022	4/21/2022	0.50	16.00	16.50	0.021%	0.00
SARATOGA RACK MARKETING LLC	27,779.52	EFT	4/7/2022	4/7/2022	4/21/2022	0.50	14.00	14.50	0.020%	0.00
SARATOGA RACK MARKETING LLC	27,786.14	EFT	4/7/2022	4/7/2022	4/21/2022	0.50	14.00	14.50	0.020%	0.00
SARATOGA RACK MARKETING LLC	27,779.52	EFT	4/7/2022	4/7/2022	4/21/2022	0.50	14.00	14.50	0.020%	0.00
SARATOGA RACK MARKETING LLC	27,783.23	EFT	4/7/2022	4/7/2022	4/21/2022	0.50	14.00	14.50	0.020%	0.00
SARATOGA RACK MARKETING LLC	28,225.82	EFT	4/13/2022	4/13/2022	4/22/2022	0.50	9.00	9.50	0.020%	0.00
SARATOGA RACK MARKETING LLC	28,225.82	EFT	4/13/2022	4/13/2022	4/22/2022	0.50	9.00	9.50	0.020%	0.00
SARATOGA RACK MARKETING LLC	28,263.45	EFT	4/13/2022	4/13/2022	4/25/2022	0.50	12.00	12.50	0.020%	0.00
SARATOGA RACK MARKETING LLC	29,871.85	EFT	4/14/2022	4/14/2022	4/25/2022	0.50	11.00	11.50	0.022%	0.00
SARATOGA RACK MARKETING LLC	29,871.85	EFT	4/14/2022	4/14/2022	4/25/2022	0.50	11.00	11.50	0.022%	0.00
SARATOGA RACK MARKETING LLC	29,875.82	EFT	4/14/2022	4/14/2022	4/25/2022	0.50	11.00	11.50	0.022%	0.00
SARATOGA RACK MARKETING LLC	29,875.82	EFT	4/14/2022	4/14/2022	4/25/2022	0.50	11.00	11.50	0.022%	0.00
SARATOGA RACK MARKETING LLC	29,410.82	EFT	4/20/2022	4/20/2022	4/27/2022	0.50	7.00	7.50	0.021%	0.00
SARATOGA RACK MARKETING LLC	29,410.82	EFT	4/20/2022	4/20/2022	4/27/2022	0.50	7.00	7.50	0.021%	0.00
SARATOGA RACK MARKETING LLC	29,426.50	EFT	4/20/2022	4/20/2022	4/27/2022	0.50	7.00	7.50	0.021%	0.00
SARATOGA RACK MARKETING LLC	29,410.82	EFT	4/20/2022	4/20/2022	4/27/2022	0.50	7.00	7.50	0.021%	0.00
SARATOGA RACK MARKETING LLC	28,860.05	EFT	3/31/2022	3/31/2022	4/28/2022	0.50	28.00	28.50	0.021%	0.01
SARATOGA RACK MARKETING LLC	28,852.45	EFT	3/31/2022	3/31/2022	4/28/2022	0.50	28.00	28.50	0.021%	0.01
SARATOGA RACK MARKETING LLC	28,413.35	EFT	3/30/2022	3/30/2022	4/28/2022	0.50	29.00	29.50	0.021%	0.01
SARATOGA RACK MARKETING LLC	28,420.94	EFT	3/30/2022	3/30/2022	4/28/2022	0.50	29.00	29.50	0.021%	0.01
SARATOGA RACK MARKETING LLC	28,436.09	EFT	3/30/2022	3/30/2022	4/28/2022	0.50	29.00	29.50	0.021%	0.01
SARATOGA RACK MARKETING LLC	28,432.31	EFT	3/30/2022	3/30/2022	4/28/2022	0.50	29.00	29.50	0.021%	0.01
SARATOGA RACK MARKETING LLC	28,860.15	EFT	3/31/2022	3/31/2022	4/28/2022	0.50	28.00	28.50	0.021%	0.01
SARATOGA RACK MARKETING LLC	29,613.72	EFT	4/21/2022	4/21/2022	5/9/2022	0.50	18.00	18.50	0.021%	0.00
SARATOGA RACK MARKETING LLC	29,645.29	EFT	4/21/2022	4/21/2022	5/9/2022	0.50	18.00	18.50	0.021%	0.00
SARATOGA RACK MARKETING LLC	29,621.61	EFT	4/21/2022	4/21/2022	5/9/2022	0.50	18.00	18.50	0.021%	0.00
SARATOGA RACK MARKETING LLC	30,216.80	EFT	4/26/2022	4/26/2022	5/9/2022	0.50	13.00	13.50	0.022%	0.00
SARATOGA RACK MARKETING LLC	29,629.51	EFT	4/21/2022	4/21/2022	5/9/2022	0.50	18.00	18.50	0.021%	0.00
SARATOGA RACK MARKETING LLC	30,236.93	EFT	4/26/2022	4/26/2022	5/9/2022	0.50	13.00	13.50	0.022%	0.00
SARATOGA RACK MARKETING LLC	30,232.91	EFT	4/26/2022	4/26/2022	5/9/2022	0.50	13.00	13.50	0.022%	0.00
SARATOGA RACK MARKETING LLC	32,975.26	EFT	5/3/2022	5/3/2022	5/12/2022	0.50	9.00	9.50	0.024%	0.00
SARATOGA RACK MARKETING LLC	32,970.86	EFT	5/3/2022	5/3/2022	5/12/2022	0.50	9.00	9.50	0.024%	0.00
SARATOGA RACK MARKETING LLC	32,187.44	EFT	5/4/2022	5/4/2022	5/12/2022	0.50	8.00	8.50	0.023%	0.00
SARATOGA RACK MARKETING LLC	32,191.73	EFT	5/4/2022	5/4/2022	5/12/2022	0.50	8.00	8.50	0.023%	0.00
SARATOGA RACK MARKETING LLC	32,200.32	EFT	5/4/2022	5/4/2022	5/12/2022	0.50	8.00	8.50	0.023%	0.00
SARATOGA RACK MARKETING LLC	32,200.32	EFT	5/4/2022	5/4/2022	5/12/2022	0.50	8.00	8.50	0.023%	0.00
SARATOGA RACK MARKETING LLC	32,952.11	EFT	5/5/2022	5/5/2022	5/12/2022	0.50	7.00	7.50	0.024%	0.00
SARATOGA RACK MARKETING LLC	32,960.89	EFT	5/5/2022	5/5/2022	5/12/2022	0.50	7.00	7.50	0.024%	0.00
SARATOGA RACK MARKETING LLC	30,730.82	EFT	5/10/2022	5/10/2022	5/19/2022	0.50	9.00	9.50	0.022%	0.00
SARATOGA RACK MARKETING LLC	30,739.02	EFT	5/10/2022	5/10/2022	5/19/2022	0.50	9.00	9.50	0.022%	0.00
SARATOGA RACK MARKETING LLC	31,360.82	EFT	5/11/2022	5/11/2022	5/19/2022	0.50	8.00	8.50	0.023%	0.00
SARATOGA RACK MARKETING LLC	31,419.26	EFT	5/12/2022	5/12/2022	5/19/2022	0.50	7.00	7.50	0.023%	0.00
SARATOGA RACK MARKETING LLC	31,377.54	EFT	5/11/2022	5/11/2022	5/19/2022	0.50	8.00	8.50	0.023%	0.00
SARATOGA RACK MARKETING LLC	30,802.42	EFT	4/19/2022	4/19/2022	6/9/2022	0.50	51.00	51.50	0.022%	0.01
SARATOGA RACK MARKETING LLC	30,798.32	EFT	4/19/2022	4/19/2022	6/9/2022	0.50	51.00	51.50	0.022%	0.01
SARATOGA RACK MARKETING LLC	30,798.32	EFT	4/19/2022	4/19/2022	6/9/2022	0.50	51.00	51.50	0.022%	0.01
SARATOGA RACK MARKETING LLC	30,798.32	EFT	4/19/2022	4/19/2022	6/9/2022	0.50	51.00	51.50	0.022%	0.01
SARATOGA RACK MARKETING LLC	35,271.18	EFT	5/31/2022	5/31/2022	6/9/2022	0.50	9.00	9.50	0.025%	0.00
SARATOGA RACK MARKETING LLC	36,027.12	EFT	6/1/2022	6/1/2022	6/14/2022	0.50	13.00	13.50	0.026%	0.00
SARATOGA RACK MARKETING LLC	33,615.20	EFT	5/26/2022	5/26/2022	6/16/2022	0.50	21.00	21.50	0.024%	0.01
SARATOGA RACK MARKETING LLC	33,597.28	EFT	5/26/2022	5/26/2022	6/15/2022	0.50	20.00	20.50	0.024%	0.00
SARATOGA RACK MARKETING LLC	35,271.18	EFT	5/31/2022	5/31/2022	6/15/2022	0.50	15.00	15.50	0.025%	0.00
SARATOGA RACK MARKETING LLC	35,266.48	EFT	5/31/2022	5/31/2022	6/16/2022	0.50	16.00	16.50	0.025%	0.00
SARATOGA RACK MARKETING LLC	35,285.29	EFT	5/31/2022	5/31/2022	6/16/2022	0.50	16.00	16.50	0.025%	0.00

Vendor Name	Invoice Amount	Payment Method	Period Beginning	Period End	Payment Date	Service Lead Time	Payment Lead Time	Total Lead Time	Weighting Factor	Dollar-Weighted Days
SARATOGA RACK MARKETING LLC	36,042.34	EFT	6/1/2022	6/1/2022	6/17/2022	0.50	16.00	16.50	0.026%	0.00
SARATOGA RACK MARKETING LLC	35,266.48	EFT	5/31/2022	5/31/2022	6/17/2022	0.50	17.00	17.50	0.025%	0.00
SARATOGA RACK MARKETING LLC	38,809.45	EFT	6/3/2022	6/3/2022	6/17/2022	0.50	14.00	14.50	0.028%	0.00
SARATOGA RACK MARKETING LLC	36,042.34	EFT	6/1/2022	6/1/2022	6/20/2022	0.50	19.00	19.50	0.026%	0.01
SARATOGA RACK MARKETING LLC	36,031.93	EFT	6/1/2022	6/1/2022	6/16/2022	0.50	15.00	15.50	0.026%	0.00
SARATOGA RACK MARKETING LLC	39,498.32	EFT	6/6/2022	6/6/2022	6/16/2022	0.50	10.00	10.50	0.028%	0.00
SARATOGA RACK MARKETING LLC	38,804.29	EFT	6/3/2022	6/3/2022	6/16/2022	0.50	13.00	13.50	0.028%	0.00
SARATOGA RACK MARKETING LLC	39,466.72	EFT	6/6/2022	6/6/2022	6/16/2022	0.50	10.00	10.50	0.028%	0.00
SARATOGA RACK MARKETING LLC	39,482.52	EFT	6/6/2022	6/6/2022	6/16/2022	0.50	10.00	10.50	0.028%	0.00
SARATOGA RACK MARKETING LLC	39,498.32	EFT	6/6/2022	6/6/2022	6/16/2022	0.50	10.00	10.50	0.028%	0.00
SARATOGA RACK MARKETING LLC	39,493.04	EFT	6/6/2022	6/6/2022	6/20/2022	0.50	14.00	14.50	0.028%	0.00
SARATOGA RACK MARKETING LLC	38,158.99	EFT	6/2/2022	6/2/2022	6/21/2022	0.50	19.00	19.50	0.028%	0.01
SARATOGA RACK MARKETING LLC	38,133.57	EFT	6/2/2022	6/2/2022	6/21/2022	0.50	19.00	19.50	0.028%	0.01
SARATOGA RACK MARKETING LLC	38,794.73	EFT	6/3/2022	6/3/2022	6/21/2022	0.50	18.00	18.50	0.028%	0.01
SARATOGA RACK MARKETING LLC	39,482.52	EFT	6/8/2022	6/8/2022	6/22/2022	0.50	14.00	14.50	0.028%	0.00
SARATOGA RACK MARKETING LLC	39,508.85	EFT	6/8/2022	6/8/2022	6/22/2022	0.50	14.00	14.50	0.029%	0.00
SARATOGA RACK MARKETING LLC	39,493.04	EFT	6/8/2022	6/8/2022	6/22/2022	0.50	14.00	14.50	0.028%	0.00
SARATOGA RACK MARKETING LLC	39,927.75	EFT	6/7/2022	6/7/2022	6/23/2022	0.50	16.00	16.50	0.029%	0.00
SARATOGA RACK MARKETING LLC	40,532.88	EFT	6/13/2022	6/13/2022	6/23/2022	0.50	10.00	10.50	0.029%	0.00
SARATOGA RACK MARKETING LLC	40,538.28	EFT	6/13/2022	6/13/2022	6/22/2022	0.50	9.00	9.50	0.029%	0.00
SARATOGA RACK MARKETING LLC	39,766.78	EFT	6/14/2022	6/14/2022	6/23/2022	0.50	9.00	9.50	0.029%	0.00
SARATOGA RACK MARKETING LLC	40,118.12	EFT	6/15/2022	6/15/2022	6/23/2022	0.50	8.00	8.50	0.029%	0.00
SARATOGA RACK MARKETING LLC	40,244.57	EFT	6/16/2022	6/16/2022	6/23/2022	0.50	7.00	7.50	0.029%	0.00
SARATOGA RACK MARKETING LLC	39,885.19	EFT	6/7/2022	6/7/2022	6/23/2022	0.50	16.00	16.50	0.029%	0.00
SARATOGA RACK MARKETING LLC	37,742.30	EFT	6/23/2022	6/23/2022	6/29/2022	0.50	6.00	6.50	0.027%	0.00
SARATOGA RACK MARKETING LLC	37,712.13	EFT	6/23/2022	6/23/2022	6/29/2022	0.50	6.00	6.50	0.027%	0.00
SARATOGA RACK MARKETING LLC	33,749.57	EFT	6/30/2022	6/30/2022	7/18/2022	0.50	18.00	18.50	0.024%	0.00
SARATOGA RACK MARKETING LLC	33,763.07	EFT	6/30/2022	6/30/2022	7/18/2022	0.50	18.00	18.50	0.024%	0.00
SARATOGA RACK MARKETING LLC	33,758.57	EFT	6/30/2022	6/30/2022	7/18/2022	0.50	18.00	18.50	0.024%	0.00
SARATOGA RACK MARKETING LLC	32,807.70	EFT	7/1/2022	7/1/2022	7/18/2022	0.50	17.00	17.50	0.024%	0.00
SARATOGA RACK MARKETING LLC	33,772.08	EFT	6/30/2022	6/30/2022	7/18/2022	0.50	18.00	18.50	0.024%	0.00
SARATOGA RACK MARKETING LLC	29,677.49	EFT	7/7/2022	7/7/2022	7/18/2022	0.50	11.00	11.50	0.021%	0.00
SARATOGA RACK MARKETING LLC	29,681.44	EFT	7/7/2022	7/7/2022	7/18/2022	0.50	11.00	11.50	0.021%	0.00
SARATOGA RACK MARKETING LLC	31,234.97	EFT	7/8/2022	7/8/2022	7/18/2022	0.50	10.00	10.50	0.023%	0.00
SARATOGA RACK MARKETING LLC	29,669.57	EFT	7/7/2022	7/7/2022	7/18/2022	0.50	11.00	11.50	0.021%	0.00
SARATOGA RACK MARKETING LLC	31,222.47	EFT	7/8/2022	7/8/2022	7/18/2022	0.50	10.00	10.50	0.023%	0.00
SARATOGA RACK MARKETING LLC	33,474.91	EFT	7/5/2022	7/5/2022	7/18/2022	0.50	13.00	13.50	0.024%	0.00
SARATOGA RACK MARKETING LLC	33,466.00	EFT	7/5/2022	7/5/2022	7/18/2022	0.50	13.00	13.50	0.024%	0.00
SARATOGA RACK MARKETING LLC	33,466.00	EFT	7/5/2022	7/5/2022	7/18/2022	0.50	13.00	13.50	0.024%	0.00
SARATOGA RACK MARKETING LLC	30,990.34	EFT	7/6/2022	7/6/2022	7/18/2022	0.50	12.00	12.50	0.022%	0.00
SARATOGA RACK MARKETING LLC	30,998.59	EFT	7/6/2022	7/6/2022	7/18/2022	0.50	12.00	12.50	0.022%	0.00
SARATOGA RACK MARKETING LLC	29,669.57	EFT	7/7/2022	7/7/2022	7/18/2022	0.50	11.00	11.50	0.021%	0.00
SARATOGA RACK MARKETING LLC	33,470.46	EFT	7/5/2022	7/5/2022	7/18/2022	0.50	13.00	13.50	0.024%	0.00
SARATOGA RACK MARKETING LLC	32,816.44	EFT	7/1/2022	7/1/2022	7/18/2022	0.50	17.00	17.50	0.024%	0.00
SARATOGA RACK MARKETING LLC	32,825.20	EFT	7/1/2022	7/1/2022	7/18/2022	0.50	17.00	17.50	0.024%	0.00
SARATOGA RACK MARKETING LLC	33,457.07	EFT	7/5/2022	7/5/2022	7/18/2022	0.50	13.00	13.50	0.024%	0.00
SARATOGA RACK MARKETING LLC	33,461.52	EFT	7/5/2022	7/5/2022	7/18/2022	0.50	13.00	13.50	0.024%	0.00
SARATOGA RACK MARKETING LLC	33,479.38	EFT	7/5/2022	7/5/2022	7/18/2022	0.50	13.00	13.50	0.024%	0.00
SARATOGA RACK MARKETING LLC	33,048.52	EFT	7/5/2022	7/5/2022	8/15/2022	0.50	41.00	41.50	0.024%	0.01
SARATOGA RACK MARKETING LLC	33,070.55	EFT	7/5/2022	7/5/2022	8/15/2022	0.50	41.00	41.50	0.024%	0.01
SARATOGA RACK MARKETING LLC	30,590.48	EFT	7/6/2022	7/6/2022	8/15/2022	0.50	40.00	40.50	0.022%	0.01
SARATOGA RACK MARKETING LLC	30,594.56	EFT	7/6/2022	7/6/2022	8/19/2022	0.50	44.00	44.50	0.022%	0.01
SARATOGA RACK MARKETING LLC	29,277.63	EFT	7/7/2022	7/7/2022	8/15/2022	0.50	39.00	39.50	0.021%	0.01
SARATOGA RACK MARKETING LLC	29,265.92	EFT	7/7/2022	7/7/2022	8/15/2022	0.50	39.00	39.50	0.021%	0.01
SARATOGA RACK MARKETING LLC	30,826.79	EFT	7/8/2022	7/8/2022	8/15/2022	0.50	38.00	38.50	0.022%	0.01
SARATOGA RACK MARKETING LLC	30,818.57	EFT	7/8/2022	7/8/2022	8/15/2022	0.50	38.00	38.50	0.022%	0.01
SARATOGA RACK MARKETING LLC	30,762.67	EFT	7/11/2022	7/11/2022	8/15/2022	0.50	35.00	35.50	0.022%	0.01
SARATOGA RACK MARKETING LLC	30,750.38	EFT	7/11/2022	7/11/2022	8/15/2022	0.50	35.00	35.50	0.022%	0.01
SARATOGA RACK MARKETING LLC	30,952.44	EFT	7/12/2022	7/12/2022	8/15/2022	0.50	34.00	34.50	0.022%	0.01
SARATOGA RACK MARKETING LLC	29,610.48	EFT	7/13/2022	7/13/2022	8/15/2022	0.50	33.00	33.50	0.021%	0.01
SARATOGA RACK MARKETING LLC	30,968.94	EFT	7/12/2022	7/12/2022	8/15/2022	0.50	34.00	34.50	0.022%	0.01
SARATOGA RACK MARKETING LLC	29,285.59	EFT	7/14/2022	7/14/2022	9/14/2022	0.50	62.00	62.50	0.021%	0.01
SARATOGA RACK MARKETING LLC	29,297.30	EFT	7/14/2022	7/14/2022	9/14/2022	0.50	62.00	62.50	0.021%	0.01
SARATOGA RACK MARKETING LLC	29,626.26	EFT	7/13/2022	7/13/2022	8/15/2022	0.50	33.00	33.50	0.021%	0.01
SARATOGA RACK MARKETING LLC	28,707.92	EFT	7/15/2022	7/15/2022	9/14/2022	0.50	61.00	61.50	0.021%	0.01
SARATOGA RACK MARKETING LLC	28,681.14	EFT	7/15/2022	7/15/2022	8/15/2022	0.50	31.00	31.50	0.021%	0.01
SARATOGA RACK MARKETING LLC	28,564.77	EFT	7/18/2022	7/18/2022	8/15/2022	0.50	28.00	28.50	0.021%	0.01
SARATOGA RACK MARKETING LLC	28,572.37	EFT	7/18/2022	7/18/2022	8/15/2022	0.50	28.00	28.50	0.021%	0.01
SARATOGA RACK MARKETING LLC	28,287.39	EFT	7/19/2022	7/19/2022	8/15/2022	0.50	27.00	27.50	0.020%	0.01
SARATOGA RACK MARKETING LLC	28,272.31	EFT	7/19/2022	7/19/2022	8/15/2022	0.50	27.00	27.50	0.020%	0.01
SARATOGA RACK MARKETING LLC	27,859.93	EFT	7/20/2022	7/20/2022	8/15/2022	0.50	26.00	26.50	0.020%	0.01
SARATOGA RACK MARKETING LLC	27,874.78	EFT	7/20/2022	7/20/2022	9/14/2022	0.50	56.00	56.50	0.020%	0.01
SARATOGA RACK MARKETING LLC	27,601.22	EFT	7/21/2022	7/22/2022	8/15/2022	1.00	24.00	25.00	0.020%	0.00
SARATOGA RACK MARKETING LLC	27,612.25	EFT	7/21/2022	7/22/2022	8/19/2022	1.00	28.00	29.00	0.020%	0.01
SARATOGA RACK MARKETING LLC	27,511.24	EFT	7/22/2022	7/22/2022	8/17/2022	0.50	26.00	26.50	0.020%	0.01
SARATOGA RACK MARKETING LLC	27,514.91	EFT	7/22/2022	7/22/2022	8/17/2022	0.50	26.00	26.50	0.020%	0.01
SARATOGA RACK MARKETING LLC	26,457.99	EFT	7/25/2022	7/25/2022	8/17/2022	0.50	23.00	23.50	0.019%	0.00
SARATOGA RACK MARKETING LLC	26,461.52	EFT	7/25/2022	7/25/2022	8/17/2022	0.50	23.00	23.50	0.019%	0.00
SARATOGA RACK MARKETING LLC	26,238.81	EFT	7/26/2022	7/26/2022	9/26/2022	0.50	62.00	62.50	0.019%	0.01
SARATOGA RACK MARKETING LLC	26,242.31	EFT	7/26/2022	7/26/2022	9/26/2022	0.50	62.00	62.50	0.019%	0.01
SARATOGA RACK MARKETING LLC	26,193.78	EFT	7/27/2022	7/27/2022	9/26/2022	0.50	61.00	61.50	0.019%	0.01
SARATOGA RACK MARKETING LLC	26,186.80	EFT	7/27/2022	7/27/2022	8/17/2022	0.50	21.00	21.50	0.019%	0.00
SARATOGA RACK MARKETING LLC	26,892.32	EFT	7/28/2022	7/30/2022	9/26/2022	1.50	58.00	59.50	0.019%	0.01
SARATOGA RACK MARKETING LLC	26,895.90	EFT	7/28/2022	7/30/2022	9/26/2022	1.50	58.00	59.50	0.019%	0.01
SARATOGA RACK MARKETING LLC	26,001.28	EFT	7/29/2022	7/29/2022	9/26/2022	0.50	59.00	59.50	0.019%	0.01
SARATOGA RACK MARKETING LLC	25,836.73	EFT	8/1/2022	8/1/2022	8/25/2022	0.50	24.00	24.50	0.019%	0.00
SARATOGA RACK MARKETING LLC	25,805.75	EFT	8/1/2022	8/1/2022	8/25/2022	0.50	24.00	24.50	0.019%	0.00
SARATOGA RACK MARKETING LLC	25,822.95	EFT	8/1/2022	8/1/2022	8/25/2022	0.50	24.00	24.50	0.019%	0.00
SARATOGA RACK MARKETING LLC	25,200.67	EFT	8/2/2022	8/2/2022	8/24/2022	0.50	22.00	22.50	0.018%	0.00
SARATOGA RACK MARKETING LLC	25,217.49	EFT	8/2/2022	8/2/2022	9/26/2022	0.50	55.00	55.50	0.018%	0.01
SARATOGA RACK MARKETING LLC	24,876.40	EFT	8/3/2022	8/3/2022	8/25/2022	0.50	22.00	22.50	0.018%	0.00
SARATOGA RACK MARKETING LLC	24,846.56	EFT	8/3/2022	8/3/2022	8/25/2022	0.50	22.00	22.50	0.018%	0.00
SARATOGA RACK MARKETING LLC	24,863.13	EFT	8/3/2022	8/3/2022	8/25/2022	0.50	22.00	22.50	0.018%	0.00
SARATOGA RACK MARKETING LLC	25,306.45	EFT	8/4/2022	8/4/2022	8/24/2022	0.50	20.00	20.50	0.018%	0.00
SARATOGA RACK MARKETING LLC	25,309.82	EFT	8/4/2022	8/4/2022	8/25/2022	0.50	21.00	21.50	0.018%	0.00
SARATOGA RACK MARKETING LLC	25,313.19	EFT	8/4/2022	8/4/2022	8/24/2022	0.50	20.00	20.50	0.018%	0.00
SARATOGA RACK MARKETING LLC	24,187.00	EFT	8/9/2022	8/9/2022	8/25/2022	0.50	16.00	16.50	0.017%	0.00
SARATOGA RACK MARKETING LLC	24,933.97	EFT	8/5/2022	8/5/2022	8/24/2022	0.50	19.00	19.50	0.018%	0.00
SARATOGA RACK MARKETING LLC	24,917.35	EFT	8/5/2022	8/5/2022	8/25/2022	0.50	20.00	20.50	0.018%	0.00
SARATOGA RACK MARKETING LLC	24,933.97	EFT	8/5/2022	8/5/2022	8/25/2022	0.50	20.00	20.50	0.018%	0.00

Vendor Name	Invoice Amount	Payment Method	Period Beginning	Period End	Payment Date	Service Lead Time	Payment Lead Time	Total Lead Time	Weighting Factor	Dollar-Weighted Days
SARATOGA RACK MARKETING LLC	24,355.08	EFT	8/8/2022	8/8/2022	8/25/2022	0.50	17.00	17.50	0.018%	0.00
SARATOGA RACK MARKETING LLC	24,358.33	EFT	8/8/2022	8/8/2022	8/25/2022	0.50	17.00	17.50	0.018%	0.00
SARATOGA RACK MARKETING LLC	24,170.88	EFT	8/9/2022	8/9/2022	8/25/2022	0.50	16.00	16.50	0.017%	0.00
SARATOGA RACK MARKETING LLC	24,164.43	EFT	8/9/2022	8/9/2022	8/25/2022	0.50	16.00	16.50	0.017%	0.00
SARATOGA RACK MARKETING LLC	25,200.67	EFT	8/2/2022	8/2/2022	9/26/2022	0.50	55.00	55.50	0.018%	0.01
SARATOGA RACK MARKETING LLC	24,371.32	EFT	8/8/2022	8/8/2022	8/25/2022	0.50	17.00	17.50	0.018%	0.00
SARATOGA RACK MARKETING LLC	25,990.89	EFT	7/29/2022	7/29/2022	9/26/2022	0.50	59.00	59.50	0.019%	0.01
SARATOGA RACK MARKETING LLC	25,955.11	EFT	8/11/2022	8/11/2022	9/1/2022	0.50	21.00	21.50	0.019%	0.00
SARATOGA RACK MARKETING LLC	25,355.93	EFT	8/10/2022	8/10/2022	9/1/2022	0.50	22.00	22.50	0.018%	0.00
SARATOGA RACK MARKETING LLC	25,376.22	EFT	8/10/2022	8/10/2022	9/1/2022	0.50	22.00	22.50	0.018%	0.00
SARATOGA RACK MARKETING LLC	25,369.45	EFT	8/10/2022	8/10/2022	9/1/2022	0.50	22.00	22.50	0.018%	0.00
SARATOGA RACK MARKETING LLC	28,350.94	EFT	8/18/2022	8/18/2022	9/16/2022	0.50	29.00	29.50	0.020%	0.01
SARATOGA RACK MARKETING LLC	28,373.63	EFT	8/18/2022	8/18/2022	9/16/2022	0.50	29.00	29.50	0.020%	0.01
SARATOGA RACK MARKETING LLC	28,373.63	EFT	8/18/2022	8/18/2022	9/16/2022	0.50	29.00	29.50	0.020%	0.01
SARATOGA RACK MARKETING LLC	27,514.58	EFT	8/17/2022	8/17/2022	9/16/2022	0.50	30.00	30.50	0.020%	0.01
SARATOGA RACK MARKETING LLC	27,488.90	EFT	8/17/2022	8/17/2022	9/16/2022	0.50	30.00	30.50	0.020%	0.01
SARATOGA RACK MARKETING LLC	28,182.34	EFT	8/15/2022	8/15/2022	9/16/2022	0.50	32.00	32.50	0.020%	0.01
SARATOGA RACK MARKETING LLC	27,503.57	EFT	8/17/2022	8/17/2022	9/16/2022	0.50	30.00	30.50	0.020%	0.01
SARATOGA RACK MARKETING LLC	27,372.62	EFT	8/16/2022	8/16/2022	9/16/2022	0.50	31.00	31.50	0.020%	0.01
SARATOGA RACK MARKETING LLC	27,379.92	EFT	8/16/2022	8/16/2022	9/16/2022	0.50	31.00	31.50	0.020%	0.01
SARATOGA RACK MARKETING LLC	28,354.73	EFT	8/18/2022	8/18/2022	9/21/2022	0.50	34.00	34.50	0.020%	0.01
SARATOGA RACK MARKETING LLC	27,510.90	EFT	8/17/2022	8/17/2022	9/21/2022	0.50	35.00	35.50	0.020%	0.01
ARM ENERGY MANAGEMENT LLC	28,000.00	EFT	12/1/2021	12/31/2021	1/25/2022	15.50	25.00	40.50	0.020%	0.01
COLUMBIA GAS TRANSMISSION CORP	490,736.29	EFT	9/1/2021	9/30/2021	10/22/2021	15.00	22.00	37.00	0.354%	0.13
COLUMBIA GAS TRANSMISSION CORP	483,782.12	EFT	10/1/2021	10/31/2021	11/22/2021	15.50	22.00	37.50	0.349%	0.13
COLUMBIA GAS TRANSMISSION CORP	462,458.31	EFT	11/1/2021	11/30/2021	12/20/2021	15.00	20.00	35.00	0.334%	0.12
COLUMBIA GAS TRANSMISSION CORP	499,278.82	EFT	12/1/2021	12/31/2021	1/24/2022	15.50	24.00	39.50	0.360%	0.14
COLUMBIA GAS TRANSMISSION CORP	533,157.32	EFT	1/1/2022	1/31/2022	2/22/2022	15.50	22.00	37.50	0.385%	0.14
COLUMBIA GAS TRANSMISSION CORP	376,699.04	EFT	2/1/2022	2/28/2022	3/21/2022	14.00	21.00	35.00	0.272%	0.10
COLUMBIA GAS TRANSMISSION CORP	470,367.03	EFT	3/1/2022	3/31/2022	4/25/2022	15.50	25.00	40.50	0.339%	0.14
COLUMBIA GAS TRANSMISSION CORP	514,457.93	EFT	4/1/2022	4/30/2022	5/23/2022	15.00	23.00	38.00	0.371%	0.14
COLUMBIA GAS TRANSMISSION LLC	518,235.17	EFT	5/1/2022	5/31/2022	6/22/2022	15.50	22.00	37.50	0.374%	0.14
COLUMBIA GAS TRANSMISSION LLC	498,469.09	EFT	6/1/2022	6/30/2022	7/19/2022	15.00	19.00	34.00	0.360%	0.12
COLUMBIA GAS TRANSMISSION LLC	510,557.87	EFT	7/1/2022	7/31/2022	8/19/2022	15.50	19.00	34.50	0.368%	0.13
COLUMBIA GAS TRANSMISSION LLC	511,353.37	EFT	8/1/2022	8/31/2022	9/15/2022	15.50	15.00	30.50	0.369%	0.11
DTE ENERGY TRADING INC	1,704.00	EFT	11/1/2021	11/30/2021	12/27/2021	15.00	27.00	42.00	0.001%	0.00
EDF TRADING NORTH AMERICA LLC	44,408.25	EFT	1/1/2022	1/31/2022	2/25/2022	15.50	25.00	40.50	0.032%	0.01
EMERA ENERGY SERVICES INC	95,250.00	EFT	9/1/2021	9/30/2021	10/25/2021	15.00	25.00	40.00	0.069%	0.03
INTERSTATE GAS SUPPLY INC	40,500.00	EFT	9/1/2021	9/30/2021	10/25/2021	15.00	25.00	40.00	0.029%	0.01
J ARON & COMPANY	291,580.00	EFT	9/1/2021	9/30/2021	10/25/2021	15.00	25.00	40.00	0.210%	0.08
MACQUARIE ENERGY LLC	1,823,253.50	EFT	9/1/2021	9/30/2021	10/25/2021	15.00	25.00	40.00	1.315%	0.53
MACQUARIE ENERGY LLC	5,832,479.25	EFT	1/1/2022	1/31/2022	2/25/2022	15.50	25.00	40.50	4.208%	1.70
MACQUARIE ENERGY LLC	1,722,065.00	EFT	2/1/2022	2/28/2022	3/25/2022	14.00	25.00	39.00	1.242%	0.48
MACQUARIE ENERGY LLC	1,527,663.75	EFT	3/1/2022	3/31/2022	4/25/2022	15.50	25.00	40.50	1.102%	0.45
MACQUARIE ENERGY LLC	834,750.00	EFT	4/1/2022	4/30/2022	5/25/2022	15.00	25.00	40.00	0.602%	0.24
MACQUARIE ENERGY LLC	3,996,800.00	EFT	5/1/2022	5/31/2022	6/27/2022	15.50	27.00	42.50	2.884%	1.23
MACQUARIE ENERGY LLC	3,799,475.00	EFT	6/1/2022	6/30/2022	7/25/2022	15.00	25.00	40.00	2.741%	1.10
MACQUARIE ENERGY LLC	3,529,575.00	EFT	7/1/2022	7/31/2022	8/25/2022	15.50	25.00	40.50	2.547%	1.03
MACQUARIE ENERGY LLC	2,525,797.50	EFT	8/1/2022	8/31/2022	9/26/2022	15.50	26.00	41.50	1.822%	0.76
MERCURIA ENERGY AMERICA INC	80,370.00	EFT	10/1/2021	10/31/2021	11/26/2021	15.50	26.00	41.50	0.058%	0.02
MERCURIA ENERGY AMERICA INC	159,625.00	EFT	12/1/2021	12/31/2021	1/25/2022	15.50	25.00	40.50	0.115%	0.05
MERCURIA ENERGY AMERICA INC	136,200.00	EFT	1/1/2022	1/31/2022	2/25/2022	15.50	25.00	40.50	0.098%	0.04
NEXTERA ENERGY MARKETING LLC	50,850.00	EFT	1/1/2022	1/31/2022	2/25/2022	15.50	25.00	40.50	0.037%	0.01
NEXTERA ENERGY MARKETING LLC	86,492.00	EFT	5/1/2022	5/31/2022	6/27/2022	15.50	27.00	42.50	0.062%	0.03
SEQUENT ENERGY MANAGEMENT LLC	112,000.00	EFT	7/1/2022	7/31/2022	8/24/2022	15.50	24.00	39.50	0.081%	0.03
SEQUENT ENERGY MANAGEMENT LP	740,647.50	EFT	9/1/2021	9/30/2021	10/25/2021	15.00	25.00	40.00	0.534%	0.21
SEQUENT ENERGY MANAGEMENT LP	14,999.68	EFT	10/1/2021	10/31/2021	11/26/2021	15.50	26.00	41.50	0.011%	0.00
SEQUENT ENERGY MANAGEMENT LP	680,912.50	EFT	12/1/2021	12/31/2021	1/25/2022	15.50	25.00	40.50	0.491%	0.20
SEQUENT ENERGY MANAGEMENT LP	877,850.00	EFT	1/1/2022	1/31/2022	2/25/2022	15.50	25.00	40.50	0.633%	0.26
SEQUENT ENERGY MANAGEMENT LP	502,400.00	EFT	3/1/2022	3/31/2022	4/25/2022	15.50	25.00	40.50	0.362%	0.15
SNYDER BROTHERS INC	63,800.00	EFT	12/1/2021	12/31/2021	1/25/2022	15.50	25.00	40.50	0.046%	0.02
SPOTLIGHT ENERGY LLC	49,028.00	EFT	9/1/2021	9/30/2021	10/25/2021	15.00	25.00	40.00	0.035%	0.01
VITOL INC	287.50	EFT	12/1/2021	12/31/2021	1/25/2022	15.50	25.00	40.50	0.000%	0.00
VITOL INC	370,137.50	EFT	1/1/2022	1/31/2022	2/25/2022	15.50	25.00	40.50	0.267%	0.11
VITOL INC	1,040,562.50	EFT	2/1/2022	2/28/2022	3/25/2022	14.00	25.00	39.00	0.751%	0.29
VITOL INC	238,750.00	EFT	3/1/2022	3/31/2022	4/25/2022	15.50	25.00	40.50	0.172%	0.07
VITOL INC	764,750.00	EFT	5/1/2022	5/31/2022	6/27/2022	15.50	27.00	42.50	0.552%	0.23
VITOL INC	921,100.00	EFT	6/1/2022	6/30/2022	7/25/2022	15.00	25.00	40.00	0.665%	0.27
VITOL INC	106,000.00	EFT	7/1/2022	7/31/2022	8/25/2022	15.50	25.00	40.50	0.076%	0.03
VITOL INC	235,545.80	EFT	8/1/2022	8/31/2022	9/26/2022	15.50	26.00	41.50	0.170%	0.07
	$ 138,599,809.87									23.00

KENTUCKY POWER COMPANY
LEAD LAG STUDY
PAYROLL, BENEFITS, AND WITHHOLDINGS

Weighted Expense Lead Time: 13.82 days

Company	Pay Period Begin	Pay Period End	Sum Net Pay	Check Date	Midpoint of Pay Period	Payment Lead Time	Float Time (For Checks)	Total Lead Time	Weighting Factor	Weighted Lead Time
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
Kentucky Power Company	9/17/2021	9/30/2021	$ 50,663.09	10/8/2021	7.00	8.00	0.00	15.00	0.157%	0.02
Kentucky Power Company	9/17/2021	9/30/2021	2,170.72	10/8/2021	7.00	8.00	12.73	27.73	0.007%	0.00
Kentucky Power Company	9/18/2021	10/1/2021	984,962.17	10/8/2021	7.00	7.00	0.00	14.00	3.059%	0.43
Kentucky Power Company	9/18/2021	10/1/2021	15,899.00	10/8/2021	7.00	7.00	12.73	26.73	0.049%	0.01
Kentucky Power Company	10/1/2021	10/14/2021	52,634.08	10/22/2021	7.00	8.00	0.00	15.00	0.163%	0.02
Kentucky Power Company	10/1/2021	10/14/2021	2,836.75	10/22/2021	7.00	8.00	12.73	27.73	0.009%	0.00
Kentucky Power Company	10/2/2021	10/15/2021	16,667.18	10/22/2021	7.00	7.00	12.73	26.73	0.052%	0.01
Kentucky Power Company	10/2/2021	10/15/2021	923,799.42	10/22/2021	7.00	7.00	0.00	14.00	2.869%	0.40
Kentucky Power Company	10/15/2021	10/28/2021	48,980.04	11/5/2021	7.00	8.00	0.00	15.00	0.152%	0.02
Kentucky Power Company	10/15/2021	10/28/2021	3,585.67	11/5/2021	7.00	8.00	12.73	27.73	0.011%	0.00
Kentucky Power Company	10/16/2021	10/29/2021	948,657.49	11/5/2021	7.00	7.00	0.00	14.00	2.946%	0.41
Kentucky Power Company	10/16/2021	10/29/2021	37,128.72	11/5/2021	7.00	7.00	12.73	26.73	0.115%	0.03
Kentucky Power Company	10/29/2021	11/11/2021	50,809.66	11/19/2021	7.00	8.00	0.00	15.00	0.158%	0.02
Kentucky Power Company	10/29/2021	11/11/2021	3,357.77	11/19/2021	7.00	8.00	12.73	27.73	0.010%	0.00
Kentucky Power Company	10/30/2021	11/12/2021	16,387.88	11/19/2021	7.00	7.00	12.73	26.73	0.051%	0.01
Kentucky Power Company	10/30/2021	11/12/2021	976,265.57	11/19/2021	7.00	7.00	0.00	14.00	3.032%	0.42
Kentucky Power Company	11/12/2021	11/25/2021	1,949.65	12/3/2021	7.00	8.00	12.73	27.73	0.006%	0.00
Kentucky Power Company	11/12/2021	11/25/2021	49,716.52	12/3/2021	7.00	8.00	0.00	15.00	0.154%	0.02
Kentucky Power Company	11/13/2021	11/26/2021	17,596.30	12/3/2021	7.00	7.00	12.73	26.73	0.055%	0.01
Kentucky Power Company	11/13/2021	11/26/2021	996,947.85	12/3/2021	7.00	7.00	0.00	14.00	3.096%	0.43
Kentucky Power Company	11/26/2021	12/9/2021	56,553.62	12/17/2021	7.00	8.00	0.00	15.00	0.176%	0.03
Kentucky Power Company	11/26/2021	12/9/2021	4,070.33	12/17/2021	7.00	8.00	12.73	27.73	0.013%	0.00
Kentucky Power Company	11/27/2021	12/10/2021	1,039,364.50	12/17/2021	7.00	7.00	0.00	14.00	3.228%	0.45
Kentucky Power Company	11/27/2021	12/10/2021	15,171.03	12/17/2021	7.00	7.00	12.73	26.73	0.047%	0.01
Kentucky Power Company	12/10/2021	12/23/2021	66,789.41	12/31/2021	7.00	8.00	0.00	15.00	0.207%	0.03
Kentucky Power Company	12/10/2021	12/23/2021	2,235.31	12/31/2021	7.00	8.00	12.73	27.73	0.007%	0.00
Kentucky Power Company	12/11/2021	12/24/2021	1,108,077.31	12/31/2021	7.00	7.00	0.00	14.00	3.441%	0.48
Kentucky Power Company	12/11/2021	12/24/2021	17,294.89	12/31/2021	7.00	7.00	12.73	26.73	0.054%	0.01
Kentucky Power Company	12/24/2021	1/6/2022	64,085.01	1/14/2022	7.00	8.00	0.00	15.00	0.199%	0.03
Kentucky Power Company	12/24/2021	1/6/2022	2,428.85	1/14/2022	7.00	8.00	12.73	27.73	0.008%	0.00
Kentucky Power Company	12/25/2021	1/7/2022	987,369.45	1/14/2022	7.00	7.00	0.00	14.00	3.066%	0.43
Kentucky Power Company	12/25/2021	1/7/2022	15,681.94	1/14/2022	7.00	7.00	12.73	26.73	0.049%	0.01
Kentucky Power Company	1/7/2022	1/20/2022	2,533.30	1/28/2022	7.00	8.00	12.73	27.73	0.008%	0.00
Kentucky Power Company	1/7/2022	1/20/2022	55,464.58	1/28/2022	7.00	8.00	0.00	15.00	0.172%	0.03
Kentucky Power Company	1/20/2022	1/21/2022	1,765.28	1/19/2022	1.00	(2.00)	12.73	11.73	0.005%	0.00
Kentucky Power Company	1/8/2022	1/21/2022	936,461.99	1/28/2022	7.00	7.00	0.00	14.00	2.908%	0.41
Kentucky Power Company	1/8/2022	1/21/2022	13,943.63	1/28/2022	7.00	7.00	12.73	26.73	0.043%	0.01
Kentucky Power Company	1/21/2022	2/3/2022	2,867.17	2/11/2022	7.00	8.00	12.73	27.73	0.009%	0.00
Kentucky Power Company	1/21/2022	2/3/2022	55,391.19	2/11/2022	7.00	8.00	0.00	15.00	0.172%	0.03
Kentucky Power Company	1/22/2022	2/4/2022	16,408.80	2/11/2022	7.00	7.00	12.73	26.73	0.051%	0.01
Kentucky Power Company	1/22/2022	2/4/2022	918,105.80	2/11/2022	7.00	7.00	0.00	14.00	2.851%	0.40
Kentucky Power Company	2/4/2022	2/17/2022	60,056.09	2/25/2022	7.00	8.00	0.00	15.00	0.187%	0.03
Kentucky Power Company	2/4/2022	2/17/2022	2,674.05	2/25/2022	7.00	8.00	12.73	27.73	0.008%	0.00
Kentucky Power Company	2/5/2022	2/18/2022	963,468.76	2/25/2022	7.00	7.00	0.00	14.00	2.992%	0.42
Kentucky Power Company	2/5/2022	2/18/2022	15,572.09	2/25/2022	7.00	7.00	12.73	26.73	0.048%	0.01
Kentucky Power Company	2/23/2022	2/24/2022	34,156.22	3/4/2022	1.00	8.00	12.73	21.73	0.106%	0.02
Kentucky Power Company	2/23/2022	2/24/2022	2,712,478.78	3/4/2022	1.00	8.00	0.00	9.00	8.424%	0.76
Kentucky Power Company	2/18/2022	3/3/2022	65,445.64	3/11/2022	7.00	8.00	0.00	15.00	0.203%	0.03
Kentucky Power Company	2/18/2022	3/3/2022	2,549.28	3/11/2022	7.00	8.00	12.73	27.73	0.008%	0.00
Kentucky Power Company	2/19/2022	3/4/2022	953,188.59	3/11/2022	7.00	7.00	0.00	14.00	2.960%	0.41
Kentucky Power Company	2/19/2022	3/4/2022	15,365.91	3/11/2022	7.00	7.00	12.73	26.73	0.048%	0.01
Kentucky Power Company	3/4/2022	3/17/2022	114,967.55	3/25/2022	7.00	8.00	0.00	15.00	0.357%	0.05
Kentucky Power Company	3/4/2022	3/17/2022	2,717.88	3/25/2022	7.00	8.00	12.73	27.73	0.008%	0.00
Kentucky Power Company	3/5/2022	3/18/2022	14,462.39	3/25/2022	7.00	7.00	12.73	26.73	0.045%	0.01
Kentucky Power Company	3/5/2022	3/18/2022	1,360,121.40	3/25/2022	7.00	7.00	0.00	14.00	4.224%	0.59
Kentucky Power Company	3/18/2022	3/31/2022	2,549.29	4/8/2022	7.00	8.00	12.73	27.73	0.008%	0.00
Kentucky Power Company	3/18/2022	3/31/2022	55,337.27	4/8/2022	7.00	8.00	0.00	15.00	0.172%	0.03
Kentucky Power Company	3/19/2022	4/1/2022	13,945.05	4/8/2022	7.00	7.00	12.73	26.73	0.043%	0.01
Kentucky Power Company	3/19/2022	4/1/2022	966,593.74	4/8/2022	7.00	7.00	0.00	14.00	3.002%	0.42
Kentucky Power Company	4/1/2022	4/14/2022	60,315.09	4/22/2022	7.00	8.00	0.00	15.00	0.187%	0.03
Kentucky Power Company	4/1/2022	4/14/2022	2,672.05	4/22/2022	7.00	8.00	12.73	27.73	0.008%	0.00
Kentucky Power Company	4/2/2022	4/15/2022	14,828.96	4/22/2022	7.00	7.00	12.73	26.73	0.046%	0.01
Kentucky Power Company	4/14/2022	4/15/2022	25,510.00	4/13/2022	1.00	(2.00)	12.73	11.73	0.079%	0.01
Kentucky Power Company	4/2/2022	4/15/2022	996,518.37	4/22/2022	7.00	7.00	0.00	14.00	3.095%	0.43
Kentucky Power Company	4/15/2022	4/28/2022	2,458.65	5/6/2022	7.00	8.00	12.73	27.73	0.008%	0.00
Kentucky Power Company	4/15/2022	4/28/2022	67,216.40	5/6/2022	7.00	8.00	0.00	15.00	0.209%	0.03
Kentucky Power Company	4/16/2022	4/29/2022	936,504.98	5/6/2022	7.00	7.00	0.00	14.00	2.909%	0.41
Kentucky Power Company	4/16/2022	4/29/2022	13,422.13	5/6/2022	7.00	7.00	12.73	26.73	0.042%	0.01
Kentucky Power Company	4/29/2022	5/12/2022	57,893.95	5/20/2022	7.00	8.00	0.00	15.00	0.180%	0.03
Kentucky Power Company	4/29/2022	5/12/2022	2,662.70	5/20/2022	7.00	8.00	12.73	27.73	0.008%	0.00
Kentucky Power Company	5/12/2022	5/13/2022	948.08	5/12/2022	1.00	(1.00)	12.73	12.73	0.003%	0.00
Kentucky Power Company	4/30/2022	5/13/2022	13,630.35	5/20/2022	7.00	7.00	12.73	26.73	0.042%	0.01
Kentucky Power Company	4/30/2022	5/13/2022	1,010,546.73	5/20/2022	7.00	7.00	0.00	14.00	3.138%	0.44
Kentucky Power Company	5/13/2022	5/26/2022	2,354.51	6/3/2022	7.00	8.00	12.73	27.73	0.007%	0.00
Kentucky Power Company	5/13/2022	5/26/2022	51,051.40	6/3/2022	7.00	8.00	0.00	15.00	0.159%	0.02
Kentucky Power Company	5/14/2022	5/27/2022	996,223.01	6/3/2022	7.00	7.00	0.00	14.00	3.094%	0.43
Kentucky Power Company	5/14/2022	5/27/2022	17,295.78	6/3/2022	7.00	7.00	12.73	26.73	0.054%	0.01
Kentucky Power Company	5/27/2022	6/9/2022	56,022.16	6/17/2022	7.00	8.00	0.00	15.00	0.174%	0.03
Kentucky Power Company	5/27/2022	6/9/2022	2,252.07	6/17/2022	7.00	8.00	12.73	27.73	0.007%	0.00
Kentucky Power Company	5/28/2022	6/10/2022	1,026,939.48	6/17/2022	7.00	7.00	0.00	14.00	3.189%	0.45
Kentucky Power Company	5/28/2022	6/10/2022	12,557.15	6/17/2022	7.00	7.00	12.73	26.73	0.039%	0.01
Kentucky Power Company	6/10/2022	6/23/2022	55,709.87	7/1/2022	7.00	8.00	0.00	15.00	0.173%	0.03
Kentucky Power Company	6/10/2022	6/23/2022	2,620.38	7/1/2022	7.00	8.00	12.73	27.73	0.008%	0.00
Kentucky Power Company	6/11/2022	6/24/2022	1,206,978.88	7/1/2022	7.00	7.00	0.00	14.00	3.749%	0.52
Kentucky Power Company	6/11/2022	6/24/2022	12,045.69	7/1/2022	7.00	7.00	12.73	26.73	0.037%	0.01
Kentucky Power Company	6/24/2022	7/7/2022	2,441.48	7/15/2022	7.00	8.00	12.73	27.73	0.008%	0.00
Kentucky Power Company	6/24/2022	7/7/2022	56,348.22	7/15/2022	7.00	8.00	0.00	15.00	0.175%	0.03
Kentucky Power Company	6/25/2022	7/8/2022	19,812.93	7/15/2022	7.00	7.00	12.73	26.73	0.062%	0.02
Kentucky Power Company	6/25/2022	7/8/2022	1,145,728.22	7/15/2022	7.00	7.00	0.00	14.00	3.558%	0.50
Kentucky Power Company	7/8/2022	7/21/2022	65,753.62	7/29/2022	7.00	8.00	0.00	15.00	0.204%	0.03
Kentucky Power Company	7/8/2022	7/21/2022	3,414.37	7/29/2022	7.00	8.00	12.73	27.73	0.011%	0.00
Kentucky Power Company	7/9/2022	7/22/2022	1,186,253.89	7/29/2022	7.00	7.00	0.00	14.00	3.684%	0.52
Kentucky Power Company	7/9/2022	7/22/2022	13,479.54	7/29/2022	7.00	7.00	12.73	26.73	0.042%	0.01
Kentucky Power Company	7/22/2022	8/4/2022	2,620.39	8/12/2022	7.00	8.00	12.73	27.73	0.008%	0.00
Kentucky Power Company	7/22/2022	8/4/2022	61,417.72	8/12/2022	7.00	8.00	0.00	15.00	0.191%	0.03
Kentucky Power Company	7/23/2022	8/5/2022	9,865.65	8/12/2022	7.00	7.00	12.73	26.73	0.031%	0.01
Kentucky Power Company	7/23/2022	8/5/2022	1,477,677.90	8/12/2022	7.00	7.00	0.00	14.00	4.589%	0.64
Kentucky Power Company	8/5/2022	8/18/2022	2,620.60	8/26/2022	7.00	8.00	12.73	27.73	0.008%	0.00
Kentucky Power Company	8/5/2022	8/18/2022	56,774.52	8/26/2022	7.00	8.00	0.00	15.00	0.176%	0.03
Kentucky Power Company	8/6/2022	8/19/2022	1,204,670.91	8/26/2022	7.00	7.00	0.00	14.00	3.741%	0.52

Company	Pay Period Begin	Pay Period End	Sum Net Pay	Check Date	Midpoint of Pay Period	Payment Lead Time	Float Time (For Checks)	Total Lead Time	Weighting Factor	Weighted Lead Time
Kentucky Power Company	8/6/2022	8/19/2022	8,735.03	8/26/2022	7.00	7.00	12.73	26.73	0.027%	0.01
Kentucky Power Company	8/19/2022	9/1/2022	60,619.35	9/9/2022	7.00	8.00	0.00	15.00	0.188%	0.03
Kentucky Power Company	8/19/2022	9/1/2022	2,794.13	9/9/2022	7.00	8.00	12.73	27.73	0.009%	0.00
Kentucky Power Company	8/20/2022	9/2/2022	11,075.74	9/9/2022	7.00	7.00	12.73	26.73	0.034%	0.01
Kentucky Power Company	8/20/2022	9/2/2022	1,043,385.47	9/9/2022	7.00	7.00	0.00	14.00	3.240%	0.45
Kentucky Power Company	9/2/2022	9/15/2022	65,148.82	9/23/2022	7.00	8.00	0.00	15.00	0.202%	0.03
Kentucky Power Company	9/2/2022	9/15/2022	2,884.70	9/23/2022	7.00	8.00	12.73	27.73	0.009%	0.00
Kentucky Power Company	9/3/2022	9/16/2022	10,958.03	9/23/2022	7.00	7.00	12.73	26.73	0.034%	0.01
Kentucky Power Company	9/3/2022	9/16/2022	1,098,421.44	9/23/2022	7.00	7.00	0.00	14.00	3.411%	0.48
			$ 32,198,810.39							13.82

KENTUCKY POWER COMPANY
LEAD LAG STUDY
OTHER O&M

Weighted Lead Time: 58.44 days

Payment Method	Supplier Name	Invoice Date	Payment Date	Invoice Amount	Service Start Date	Service End Date	Service Lead Time	Payment Lead Time	Bank Float	Total Lead Time	Weighting Factor	Weighted Lead Time
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)
EFT	DS WATERS/CRYSTAL SPRINGS	11/28/2021	1/11/2022	$ 888.53	11/12/2021	11/12/2021	0.50	60.00	-	60.50	0.0486%	0.0294
EFT	SUPPLYPRO INC	9/30/2021	11/11/2021	997.00	9/30/2021	9/30/2021	0.50	42.00	-	42.50	0.0546%	0.0232
EFT	ACTALENT SERVICES LLC	7/15/2022	8/26/2022	151.90	6/5/2022	6/11/2022	3.50	76.00	-	79.50	0.0083%	0.0066
EFT	ITS TECHNOLOGIES INC	5/24/2022	6/30/2022	704.00	5/14/2022	5/20/2022	3.50	41.00	-	44.50	0.0385%	0.0171
EFT	AIRGAS USA LLC	5/9/2022	5/19/2022	900.16	5/10/2022	5/10/2022	0.50	9.00	-	9.50	0.0493%	0.0047
EFT	EQUIPMENT DEPOT	11/24/2021	1/6/2022	292.95	11/16/2021	11/16/2021	0.50	51.00	-	51.50	0.0160%	0.0083
EFT	NATIONAL BUSINESS FURNITURE	12/6/2021	1/19/2022	345.80	12/6/2021	12/6/2021	0.50	44.00	-	44.50	0.0189%	0.0084
EFT	ITS TECHNOLOGIES INC	10/15/2021	11/23/2021	880.00	10/9/2021	10/15/2021	3.50	39.00	-	42.50	0.0482%	0.0205
EFT	ASPLUNDH TREE EXPERT LLC	2/5/2022	3/21/2022	454.45	1/30/2022	2/5/2022	3.50	44.00	-	47.50	0.0249%	0.0118
CHK	CUMMINS INC	5/16/2022	6/30/2022	414.00	5/16/2022	5/16/2022	0.50	45.00	12.73	58.23	0.0227%	0.0132
EFT	BOWLIN GROUP LLC	10/22/2021	12/22/2021	782.40	8/1/2021	9/18/2021	24.50	95.00	-	119.50	0.0428%	0.0512
EFT	GRAINGER	1/19/2022	7/14/2022	183.30	1/19/2022	1/19/2022	0.50	176.00	-	176.50	0.0100%	0.0177
EFT	KING FILTRATION	9/8/2022	9/15/2022	163.52	9/8/2022	9/8/2022	0.50	7.00	-	7.50	0.0089%	0.0007
EFT	PIPE-VALVES INC	7/21/2022	8/31/2022	871.45	9/21/2022	9/21/2022	0.50	(21.00)	-	(20.50)	0.0477%	(0.0098)
EFT	UNICON INTERNATIONAL INC	12/20/2021	1/27/2022	276.00	12/14/2021	12/20/2021	3.50	38.00	-	41.50	0.0151%	0.0063
EFT	UNICON INTERNATIONAL INC	10/26/2021	12/2/2021	345.60	10/16/2021	10/22/2021	3.50	41.00	-	44.50	0.0189%	0.0084
EFT	ALIMAK GROUP USA INC	10/27/2021	12/9/2021	459.00	10/22/2021	10/22/2021	0.50	48.00	-	48.50	0.0251%	0.0122
EFT	SELECT GROUP US LLC	4/30/2022	6/13/2022	192.00	4/11/2022	4/24/2022	7.00	50.00	-	57.00	0.0105%	0.0060
EFT	UNITED RENTALS (NORTH AMERICA)	4/30/2022	6/13/2022	438.00	4/15/2022	5/13/2022	14.50	31.00	-	45.50	0.0240%	0.0109
EFT	ATLAS STEEL & SUPPLY INC	10/25/2021	12/22/2021	713.60	10/25/2021	10/25/2021	0.50	58.00	-	58.50	0.0391%	0.0228
CHK	CRITICAL CONTROL ENERGY SERVICES INC	4/8/2022	5/23/2022	660.00	3/22/2022	3/22/2022	0.50	62.00	12.73	75.23	0.0361%	0.0272
EFT	ITS TECHNOLOGIES INC	2/13/2022	3/24/2022	975.00	2/5/2022	2/11/2022	3.50	41.00	-	44.50	0.0534%	0.0237
EFT	XEROX CORP	4/9/2022	5/23/2022	309.10	4/1/2022	4/30/2022	15.00	23.00	-	38.00	0.0169%	0.0064
EFT	UNITED ELECTRIC	12/9/2021	1/20/2022	347.61	12/6/2021	12/12/2021	3.50	39.00	-	42.50	0.0190%	0.0081
EFT	ITS TECHNOLOGIES INC	5/20/2022	6/28/2022	704.00	5/14/2022	5/20/2022	3.50	39.00	-	42.50	0.0385%	0.0164
EFT	NELSON TREE SERVICE LLC	4/23/2022	6/6/2022	335.20	4/17/2022	4/23/2022	3.50	44.00	-	47.50	0.0183%	0.0087
EFT	CLEVELAND BROTHERS EQUIPMENT C	1/5/2022	8/24/2022	362.45	1/4/2022	1/4/2022	0.50	232.00	-	232.50	0.0198%	0.0461
EFT	MATHESON TRI-GAS INC	2/14/2022	3/30/2022	197.80	2/14/2022	2/14/2022	0.50	44.00	-	44.50	0.0108%	0.0048
EFT	UNITED ELECTRIC	8/25/2022	10/6/2022	602.32	8/22/2022	8/28/2022	3.50	39.00	-	42.50	0.0330%	0.0140
EFT	SANITAS TECHNOLOGIES LLC	11/1/2021	3/29/2022	195.00	11/1/2021	11/30/2022	197.50	(246.00)	-	(48.50)	0.0107%	(0.0052)
EFT	UNIVERSAL INCORPORATED	3/21/2022	5/4/2022	766.00	3/16/2022	3/18/2022	1.50	47.00	-	48.50	0.0419%	0.0203
EFT	STRUCTSURE SCAFFOLD SOLUTIONS	8/17/2022	9/29/2022	686.00	8/2/2022	8/10/2022	4.50	50.00	-	54.50	0.0375%	0.0205
EFT	PEOPLEFACTS LLC	2/28/2022	3/28/2022	153.00	2/28/2022	2/28/2022	0.50	28.00	-	28.50	0.0084%	0.0024
EFT	BRANDSAFWAY INDUSTRIES LLC	5/24/2022	7/7/2022	842.05	5/16/2022	5/22/2022	3.50	46.00	-	49.50	0.0461%	0.0228
EFT	ASPLUNDH TREE EXPERT LLC	10/23/2021	12/6/2021	592.80	10/24/2021	10/30/2021	3.50	37.00	-	40.50	0.0324%	0.0131
EFT	STRUCTSURE SCAFFOLD SOLUTIONS	3/9/2022	4/21/2022	583.92	2/28/2022	3/6/2022	3.50	46.00	-	49.50	0.0320%	0.0158
EFT	M L DILLON	2/21/2022	4/5/2022	621.42	2/21/2022	2/21/2022	0.50	43.00	-	43.50	0.0340%	0.0148
EFT	TESSCO INC	4/2/2022	5/13/2022	181.30	4/2/2022	4/2/2022	0.50	41.00	-	41.50	0.0099%	0.0041
EFT	ENERFAB INC	2/8/2022	3/24/2022	486.05	1/29/2022	2/4/2022	3.50	48.00	-	51.50	0.0266%	0.0137
EFT	CANNON COCHRAN MANAGEMENT SERVICES INC	4/5/2022	4/6/2022	149.60	3/1/2022	3/31/2022	15.50	6.00	-	21.50	0.0082%	0.0018
EFT	BRANDSAFWAY INDUSTRIES LLC	1/25/2022	3/10/2022	794.88	1/17/2022	1/23/2022	3.50	46.00	-	49.50	0.0435%	0.0215
EFT	S & C ELECTRIC CO	11/30/2021	1/13/2022	972.30	11/30/2021	11/30/2021	0.50	44.00	-	44.50	0.0532%	0.0237
EFT	SUN TECHNICAL SERVICES INC	3/25/2022	5/3/2022	845.85	3/19/2022	3/25/2022	3.50	39.00	-	42.50	0.0463%	0.0197
EFT	BRANDSAFWAY INDUSTRIES LLC	2/8/2022	3/24/2022	654.11	1/31/2022	2/6/2022	3.50	46.00	-	49.50	0.0358%	0.0177
EFT	EQUIPMENT DEPOT	12/22/2021	2/3/2022	322.72	11/10/2021	11/10/2021	0.50	85.00	-	85.50	0.0177%	0.0151
EFT	HAMILTON, GEO V INC	6/14/2022	6/23/2022	167.05	5/23/2022	5/29/2022	3.50	25.00	-	28.50	0.0091%	0.0026
EFT	TRI STATE TOOL & HOIST INC	11/18/2021	11/23/2021	145.55	11/10/2021	11/10/2021	0.50	13.00	-	13.50	0.0080%	0.0011
EFT	CARMAN INDUSTRIES INC	6/10/2022	9/19/2022	236.45	5/11/2022	5/11/2022	0.50	131.00	-	131.50	0.0129%	0.0170
EFT	BELLAIRE HARBOR SERVICES LLC	7/1/2022	7/20/2022	379.34	6/27/2022	7/1/2022	2.50	19.00	-	21.50	0.0208%	0.0045
EFT	CANNON COCHRAN MANAGEMENT SERVICES INC	5/6/2022	5/10/2022	149.60	4/1/2022	4/30/2022	15.00	10.00	-	25.00	0.0082%	0.0020
EFT	TYNDALE COMPANY INC	2/3/2022	3/17/2022	474.05	1/27/2022	1/31/2022	2.50	45.00	-	47.50	0.0259%	0.0123
EFT	BRANDSAFWAY INDUSTRIES LLC	3/29/2022	5/12/2022	125.00	3/27/2022	3/27/2022	0.50	46.00	-	46.50	0.0068%	0.0032
EFT	SOLID WASTE SERVICES	4/30/2022	6/13/2022	309.21	4/1/2022	4/30/2022	15.00	44.00	-	59.00	0.0169%	0.0100
EFT	BRANDSAFWAY INDUSTRIES LLC	8/10/2022	9/22/2022	779.55	8/1/2022	8/7/2022	3.50	46.00	-	49.50	0.0427%	0.0211
EFT	UNICON INTERNATIONAL INC	12/17/2021	1/25/2022	198.00	12/11/2021	12/17/2021	3.50	39.00	-	42.50	0.0108%	0.0046
EFT	CLARK, AMANDA C	3/31/2022	4/1/2022	325.26	2/4/2022	2/22/2022	9.50	38.00	-	47.50	0.0178%	0.0085
CHK	TALANS SERVICE & PRODUCTS LLC	2/22/2022	4/8/2022	900.00	2/17/2022	2/17/2022	0.50	50.00	12.73	63.23	0.0493%	0.0311
EFT	AP SERVICES LLC	10/21/2021	12/1/2021	199.74	10/21/2021	10/21/2021	0.50	41.00	-	41.50	0.0109%	0.0045
EFT	EMAR CORPORATION	9/8/2022	10/20/2022	650.00	8/15/2022	8/15/2022	0.50	66.00	-	66.50	0.0356%	0.0237
EFT	ALBON MEADE & SONS CONST CO	8/27/2021	10/8/2021	175.02	8/13/2021	8/13/2021	0.50	56.00	-	56.50	0.0096%	0.0054
EFT	ITS TECHNOLOGIES INC	1/24/2022	3/3/2022	880.00	1/15/2022	1/21/2022	3.50	41.00	-	44.50	0.0482%	0.0214
EFT	TRI-STATE COATING & MACHINE CO	6/14/2022	7/28/2022	175.00	6/14/2022	6/14/2022	0.50	44.00	-	44.50	0.0096%	0.0043
EFT	ITS TECHNOLOGIES INC	7/17/2022	8/25/2022	880.00	7/9/2022	7/15/2022	3.50	41.00	-	44.50	0.0482%	0.0214
EFT	BRANDSAFWAY INDUSTRIES LLC	8/10/2022	9/22/2022	125.00	8/1/2022	8/7/2022	3.50	46.00	-	49.50	0.0068%	0.0034
EFT	ITS TECHNOLOGIES INC	11/30/2021	1/6/2022	599.04	11/20/2021	11/26/2021	3.50	41.00	-	44.50	0.0328%	0.0146
EFT	BRANDSAFWAY INDUSTRIES LLC	7/19/2022	9/1/2022	963.27	7/11/2022	7/17/2022	3.50	46.00	-	49.50	0.0527%	0.0261
EFT	METALTECH STEEL CORP	12/28/2021	2/10/2022	425.00	12/28/2021	12/28/2021	0.50	44.00	-	44.50	0.0233%	0.0103
EFT	SELECT GROUP US LLC	8/26/2022	10/4/2022	217.00	8/13/2022	8/19/2022	3.50	46.00	-	49.50	0.0119%	0.0059
EFT	BRANDSAFWAY INDUSTRIES LLC	5/17/2022	6/30/2022	125.00	5/15/2022	5/15/2022	0.50	46.00	-	46.50	0.0068%	0.0032
EFT	GRAY WOODS & COOPER	10/7/2021	11/4/2021	627.00	7/8/2021	7/30/2021	11.50	97.00	-	108.50	0.0343%	0.0372
EFT	UNITED RENTALS (NORTH AMERICA)	5/28/2022	7/11/2022	589.00	5/16/2022	6/10/2022	13.00	31.00	-	44.00	0.0322%	0.0142
EFT	EQUIPMENT & CONTROLS INC	6/7/2022	7/6/2022	348.00	6/7/2022	6/7/2022	0.50	29.00	-	29.50	0.0190%	0.0056
EFT	BRANDSAFWAY INDUSTRIES LLC	3/8/2022	4/21/2022	474.29	2/21/2022	2/27/2022	3.50	53.00	-	56.50	0.0260%	0.0147
EFT	ENERFAB INC	6/15/2022	7/28/2022	740.00	4/1/2022	4/30/2022	15.00	89.00	-	104.00	0.0405%	0.0421
EFT	STEPTOE & JOHNSON	7/19/2022	7/21/2022	174.47	5/1/2022	6/21/2022	26.00	30.00	-	56.00	0.0095%	0.0053
EFT	HAMILTON, GEO V INC	5/13/2022	5/20/2022	580.00	5/13/2022	5/13/2022	0.50	7.00	-	7.50	0.0317%	0.0024
EFT	CHOCTAW-KAUL DISTRIBUTION COMP	6/1/2022	7/14/2022	386.63	6/1/2022	6/1/2022	0.50	43.00	-	43.50	0.0212%	0.0092
EFT	MATHESON TRI-GAS INC	7/25/2022	9/7/2022	817.58	7/25/2022	7/25/2022	0.50	44.00	-	44.50	0.0447%	0.0199
EFT	DS WATERS/CRYSTAL SPRINGS	5/28/2022	7/11/2022	723.27	4/8/2022	5/12/2022	17.50	60.00	-	77.50	0.0396%	0.0307
EFT	ENERFAB INC	12/9/2021	1/20/2022	159.21	11/20/2021	11/26/2021	3.50	55.00	-	58.50	0.0087%	0.0051
EFT	WOLSELEY INDUSTRIAL GROUP	7/7/2022	8/18/2022	407.70	7/7/2022	7/7/2022	0.50	42.00	-	42.50	0.0223%	0.0095
EFT	JACKSON KELLY PLLC	4/14/2022	5/12/2022	247.61	3/8/2022	3/31/2022	12.00	42.00	-	54.00	0.0135%	0.0073
EFT	MATHESON TRI-GAS INC	3/10/2022	4/21/2022	150.00	2/25/2022	2/25/2022	0.50	55.00	-	55.50	0.0082%	0.0046
EFT	BRANDSAFWAY INDUSTRIES LLC	10/27/2021	12/9/2021	420.02	10/18/2021	10/24/2021	3.50	46.00	-	49.50	0.0230%	0.0114
EFT	D-C ELEVATOR CO INC	2/23/2022	4/7/2022	600.00	2/11/2022	2/11/2022	0.50	55.00	-	55.50	0.0328%	0.0182
EFT	SELECT GROUP US LLC	8/8/2022	9/15/2022	124.00	7/30/2022	8/5/2022	3.50	41.00	-	44.50	0.0068%	0.0030
EFT	CHOCTAW-KAUL DISTRIBUTION COMP	6/2/2022	7/14/2022	235.68	6/2/2022	6/2/2022	0.50	42.00	-	42.50	0.0129%	0.0055
EFT	HAMILTON, GEO V INC	6/1/2022	6/9/2022	138.00	6/1/2022	6/1/2022	0.50	8.00	-	8.50	0.0076%	0.0006
EFT	PRIMARY CARE CENTERS OF EASTERN KENTUCKY	11/10/2021	12/2/2021	100.00	10/28/2021	10/28/2021	0.50	35.00	-	35.50	0.0055%	0.0019
EFT	UNICON INTERNATIONAL INC	10/1/2021	11/9/2021	198.00	9/25/2021	10/1/2021	3.50	39.00	-	42.50	0.0108%	0.0046
EFT	ALIMAK GROUP USA INC	10/27/2021	12/9/2021	459.00	10/22/2021	10/22/2021	0.50	48.00	-	48.50	0.0251%	0.0122
EFT	ITS TECHNOLOGIES INC	10/8/2021	11/16/2021	825.00	10/2/2021	10/8/2021	3.50	39.00	-	42.50	0.0451%	0.0192
EFT	UNITED ELECTRIC	4/7/2022	5/19/2022	104.40	4/4/2022	4/10/2022	3.50	39.00	-	42.50	0.0057%	0.0024
EFT	WESCO DISTRIBUTION INC	9/7/2022	10/20/2022	104.60	9/6/2022	9/6/2022	0.50	44.00	-	44.50	0.0057%	0.0025
EFT	UNITED ELECTRIC	10/21/2021	12/2/2021	472.69	10/18/2021	10/24/2021	3.50	39.00	-	42.50	0.0259%	0.0110
EFT	METALTECH STEEL CORP	12/22/2021	2/3/2022	169.00	12/22/2021	12/22/2021	0.50	43.00	-	43.50	0.0092%	0.0040
EFT	ANIXTER INC	3/15/2022	4/28/2022	117.28	3/15/2022	3/15/2022	0.50	44.00	-	44.50	0.0064%	0.0029
EFT	NORTH LANE TECHNOLOGIES INC	3/31/2022	5/13/2022	106.25	3/1/2022	3/31/2022	15.50	43.00	-	58.50	0.0058%	0.0034
EFT	UNITED ELECTRIC	2/10/2022	3/24/2022	319.36	2/7/2022	2/13/2022	3.50	39.00	-	42.50	0.0175%	0.0074
EFT	BRANDSAFWAY INDUSTRIES LLC	8/10/2022	9/22/2022	125.00	8/1/2022	8/7/2022	3.50	46.00	-	49.50	0.0068%	0.0034
EFT	INDUSTRIAL SANITATION INC	8/9/2022	9/22/2022	120.48	8/9/2022	9/5/2022	14.00	17.00	-	31.00	0.0066%	0.0020
EFT	UNICON INTERNATIONAL INC	9/12/2022	10/20/2022	322.00	9/3/2022	9/9/2022	3.50	41.00	-	44.50	0.0176%	0.0078
EFT	ICE TRADE VAULT	4/5/2022	4/29/2022	840.14	3/1/2022	3/31/2022	15.50	29.00	-	44.50	0.0460%	0.0205
EFT	BRANDSAFWAY INDUSTRIES LLC	2/22/2022	4/7/2022	125.00	2/14/2022	2/20/2022	3.50	46.00	-	49.50	0.0068%	0.0034
EFT	ITS TECHNOLOGIES INC	7/17/2022	8/25/2022	880.00	7/9/2022	7/15/2022	3.50	41.00	-	44.50	0.0482%	0.0214
EFT	HAMILTON, GEO V INC	11/8/2021	11/17/2021	877.60	10/25/2021	10/31/2021	3.50	17.00	-	20.50	0.0480%	0.0098
EFT	ENERFAB INC	8/11/2022	9/22/2022	826.97	7/25/2022	7/29/2022	2.50	55.00	-	57.50	0.0453%	0.0260
EFT	STEPTOE & JOHNSON	7/15/2022	8/11/2022	712.00	6/3/2022	6/30/2022	14.00	42.00	-	56.00	0.0390%	0.0218
EFT	STRUCTSURE SCAFFOLD SOLUTIONS	8/4/2022	9/15/2022	308.62	7/24/2022	7/31/2022	4.00	46.00	-	50.00	0.0169%	0.0084
EFT	INDUSTRIAL SANITATION INC	11/30/2021	1/13/2022	330.00	11/30/2021	12/27/2021	14.00	17.00	-	31.00	0.0181%	0.0056

Payment Method	Supplier Name	Invoice Date	Payment Date	Invoice Amount	Service Start Date	Service End Date	Service Lead Time	Payment Lead Time	Bank Float	Total Lead Time	Weighting Factor	Weighted Lead Time
EFT	HAMILTON, GEO V INC	11/4/2021	11/11/2021	161.36	10/18/2021	10/24/2021	3.50	18.00	-	21.50	0.0088%	0.0019
EFT	JOHNSON CONTROLS FIRE PROTECTI	10/29/2021	3/7/2022	487.74	10/28/2021	10/28/2021	0.50	130.00	-	130.50	0.0267%	0.0348
EFT	HUGHES NETWORK SYSTEMS	12/1/2021	1/3/2022	266.70	12/1/2021	12/31/2021	15.50	3.00	-	18.50	0.0146%	0.0027
EFT	POWER PRODUCTS INC	10/22/2021	12/3/2021	119.72	10/22/2021	10/22/2021	0.50	42.00	-	42.50	0.0066%	0.0028
EFT	ITS TECHNOLOGIES INC	5/14/2022	6/22/2022	880.00	5/7/2022	5/13/2022	3.50	40.00	-	43.50	0.0482%	0.0209
EFT	PDBLOWERS INC	8/2/2022	9/15/2022	668.00	8/2/2022	8/2/2022	0.50	44.00	-	44.50	0.0366%	0.0163
EFT	WESCO DISTRIBUTION INC	7/18/2022	8/31/2022	215.52	7/17/2022	7/17/2022	0.50	45.00	-	45.50	0.0118%	0.0054
EFT	UNITED ELECTRIC	12/3/2021	1/14/2022	501.51	11/29/2021	12/5/2021	3.50	40.00	-	43.50	0.0274%	0.0119
EFT	ITS TECHNOLOGIES INC	8/27/2022	10/5/2022	879.60	8/6/2022	8/12/2022	3.50	54.00	-	57.50	0.0481%	0.0277
EFT	INDUSTRIAL SANITATION INC	10/5/2021	11/18/2021	300.00	9/29/2021	11/1/2021	17.00	17.00	-	34.00	0.0164%	0.0056
EFT	ITS TECHNOLOGIES INC	1/21/2022	3/1/2022	880.00	1/15/2022	1/21/2022	3.50	39.00	-	42.50	0.0482%	0.0205
EFT	OVERHEAD DOOR OF EASTERN	2/10/2022	4/22/2022	378.00	2/7/2022	2/7/2022	0.50	74.00	-	74.50	0.0207%	0.0154
EFT	COBERN, STEVI N	11/5/2021	11/8/2021	155.12	10/19/2021	10/19/2021	0.50	20.00	-	20.50	0.0085%	0.0017
EFT	AIRGAS USA LLC	3/11/2022	3/21/2022	714.51	2/19/2022	2/19/2022	0.50	30.00	-	30.50	0.0391%	0.0119
EFT	ITS TECHNOLOGIES INC	8/20/2022	9/28/2022	880.00	8/13/2022	8/19/2022	3.50	40.00	-	43.50	0.0482%	0.0209
EFT	NELSON TREE SERVICE LLC	3/12/2022	4/25/2022	377.10	3/6/2022	3/12/2022	3.50	44.00	-	47.50	0.0206%	0.0098
EFT	NEUMANN H E CO	12/1/2021	1/13/2022	284.66	11/17/2021	11/17/2021	0.50	57.00	-	57.50	0.0156%	0.0090
EFT	ASPLUNDH TREE EXPERT LLC	9/25/2021	11/8/2021	850.90	9/19/2021	9/25/2021	3.50	44.00	-	47.50	0.0466%	0.0221
EFT	HAMILTON, GEO V INC	7/10/2022	7/19/2022	756.46	6/27/2022	7/3/2022	3.50	16.00	-	19.50	0.0414%	0.0081
CHK	CUMMINS INC	2/12/2020	6/2/2022	357.00	2/12/2020	2/12/2020	0.50	841.00	12.73	854.23	0.0195%	0.1669
EFT	MPW ENVIRONMENTAL SERVICES	3/9/2022	4/21/2022	554.64	2/24/2022	2/24/2022	0.50	56.00	-	56.50	0.0304%	0.0171
EFT	SFS TOOLS & SAFETY	10/14/2021	11/23/2021	177.80	10/14/2021	10/14/2021	0.50	40.00	-	40.50	0.0097%	0.0039
EFT	WESCO DISTRIBUTION INC	9/7/2022	10/20/2022	106.92	9/6/2022	9/6/2022	0.50	44.00	-	44.50	0.0059%	0.0026
EFT	RELIABLE EQUIPMENT & SERVICE I	5/6/2022	6/17/2022	221.96	4/29/2022	4/29/2022	0.50	49.00	-	49.50	0.0121%	0.0060
EFT	MOTION INDUSTRIES INC	3/14/2022	4/27/2022	125.20	3/14/2022	3/14/2022	0.50	44.00	-	44.50	0.0069%	0.0030
EFT	HAMILTON, GEO V INC	10/20/2021	12/1/2021	866.00	10/20/2021	10/20/2021	0.50	42.00	-	42.50	0.0474%	0.0201
EFT	BRANDSAFWAY INDUSTRIES LLC	1/11/2022	2/24/2022	121.28	1/3/2022	1/9/2022	3.50	46.00	-	49.50	0.0066%	0.0033
CHK	BIG SANDY WATER DISTRICT	5/3/2022	6/13/2022	685.49	4/4/2022	5/3/2022	15.00	41.00	12.73	68.73	0.0375%	0.0258
EFT	STEPTOE & JOHNSON	5/19/2022	6/3/2022	560.87	3/1/2022	4/30/2022	30.50	34.00	-	64.50	0.0307%	0.0198
EFT	ENERFAB INC	3/11/2022	4/22/2022	265.35	2/26/2022	3/4/2022	3.50	49.00	-	52.50	0.0145%	0.0076
EFT	BRANDSAFWAY INDUSTRIES LLC	11/23/2021	1/6/2022	550.00	11/15/2021	11/21/2021	3.50	46.00	-	49.50	0.0301%	0.0149
EFT	HUGHES NETWORK SYSTEMS	1/1/2022	1/19/2022	257.40	1/1/2022	1/31/2022	15.50	(12.00)	-	3.50	0.0141%	0.0005
EFT	GRAINGER	12/14/2021	8/22/2022	253.23	12/14/2021	12/14/2021	0.50	251.00	-	251.50	0.0139%	0.0349
EFT	ITS TECHNOLOGIES INC	8/6/2022	9/14/2022	880.00	7/30/2022	8/5/2022	3.50	40.00	-	43.50	0.0482%	0.0209
EFT	SECURITAS ELECTRONIC SECURITY	7/26/2022	9/8/2022	108.58	7/26/2022	7/26/2022	0.50	44.00	-	44.50	0.0059%	0.0026
EFT	ITS TECHNOLOGIES INC	2/18/2022	3/29/2022	998.40	2/12/2022	2/18/2022	3.50	39.00	-	42.50	0.0546%	0.0232
EFT	UNICON INTERNATIONAL INC	3/7/2022	4/13/2022	322.00	2/26/2022	3/4/2022	3.50	40.00	-	43.50	0.0176%	0.0077
EFT	HAMILTON, GEO V INC	7/19/2022	8/3/2022	140.30	7/4/2022	7/10/2022	3.50	24.00	-	27.50	0.0077%	0.0021
EFT	HACH CO	6/2/2022	7/14/2022	184.36	6/2/2022	6/2/2022	0.50	42.00	-	42.50	0.0101%	0.0043
EFT	BIG SANDY RURAL ELECTRIC COOP	4/1/2022	4/11/2022	330.44	3/1/2022	4/1/2022	16.00	10.00	-	26.00	0.0181%	0.0047
EFT	ITS TECHNOLOGIES INC	4/26/2022	6/2/2022	880.00	4/16/2022	4/22/2022	3.50	41.00	-	44.50	0.0482%	0.0214
EFT	ITS TECHNOLOGIES INC	7/2/2022	8/10/2022	800.00	7/2/2022	7/8/2022	3.50	33.00	-	36.50	0.0438%	0.0160
EFT	ITS TECHNOLOGIES INC	3/28/2022	5/5/2022	880.00	3/19/2022	3/25/2022	3.50	41.00	-	44.50	0.0482%	0.0214
EFT	EXXON MOBIL OIL CORPORATION	7/21/2022	8/18/2022	605.68	7/21/2022	7/21/2022	0.50	28.00	-	28.50	0.0331%	0.0094
EFT	KAHN, DEBRA L	8/9/2022	8/10/2022	133.75	8/3/2022	8/3/2022	0.50	7.00	-	7.50	0.0073%	0.0005
EFT	SFS TOOLS & SAFETY	9/1/2022	10/13/2022	144.77	8/1/2022	8/31/2022	15.50	43.00	-	58.50	0.0079%	0.0046
EFT	ITS TECHNOLOGIES INC	7/17/2022	8/25/2022	880.00	7/9/2022	7/15/2022	3.50	41.00	-	44.50	0.0482%	0.0214
EFT	HAMILTON, GEO V INC	2/11/2022	2/18/2022	100.00	1/24/2022	1/30/2022	3.50	19.00	-	22.50	0.0055%	0.0012
EFT	SFS TOOLS & SAFETY	2/2/2022	3/17/2022	381.79	2/2/2022	2/2/2022	0.50	43.00	-	43.50	0.0209%	0.0091
EFT	XEROX CORP	6/11/2022	7/25/2022	299.74	6/1/2022	6/30/2022	15.00	25.00	-	40.00	0.0164%	0.0066
EFT	GLOBAL EQUIPMENT CO	5/31/2022	7/14/2022	159.69	5/31/2022	5/31/2022	0.50	44.00	-	44.50	0.0087%	0.0039
EFT	ITS TECHNOLOGIES INC	8/8/2022	9/15/2022	262.50	7/30/2022	8/5/2022	3.50	41.00	-	44.50	0.0144%	0.0064
EFT	ENERFAB INC	5/5/2022	6/16/2022	345.00	4/25/2022	4/29/2022	2.50	48.00	-	50.50	0.0189%	0.0095
EFT	SELECT GROUP US LLC	9/19/2022	10/27/2022	124.00	9/10/2022	9/16/2022	3.50	41.00	-	44.50	0.0068%	0.0030
CHK	CUMMINS INC	3/17/2020	6/6/2022	113.52	3/17/2020	3/17/2020	0.50	811.00	12.73	824.23	0.0062%	0.0512
EFT	INDUSTRIAL SANITATION INC	11/23/2021	1/6/2022	235.40	11/1/2021	12/8/2021	19.00	29.00	-	48.00	0.0129%	0.0062
EFT	WRIGHT TREE SVC	12/4/2021	1/27/2022	550.45	11/28/2021	12/4/2021	3.50	54.00	-	57.50	0.0301%	0.0173
EFT	SPIRIT	7/12/2022	8/25/2022	839.13	7/12/2022	7/12/2022	0.50	44.00	-	44.50	0.0459%	0.0204
EFT	UNITED ELECTRIC	10/21/2021	12/2/2021	624.90	10/18/2021	10/24/2021	3.50	39.00	-	42.50	0.0342%	0.0145
EFT	FORD, PAUL J & CO	7/6/2022	8/4/2022	300.00	7/6/2022	7/6/2022	0.50	29.00	-	29.50	0.0164%	0.0048
EFT	SPIRIT	3/1/2022	8/10/2022	298.11	3/1/2022	3/1/2022	0.50	162.00	-	162.50	0.0163%	0.0265
EFT	HANNON ELECTRIC CO	7/1/2022	7/8/2022	133.13	7/1/2022	7/1/2022	0.50	7.00	-	7.50	0.0073%	0.0005
EFT	HAMILTON, GEO V INC	5/13/2022	5/20/2022	255.36	5/13/2022	5/13/2022	0.50	7.00	-	7.50	0.0140%	0.0010
EFT	ITS TECHNOLOGIES INC	6/3/2022	7/12/2022	703.68	5/28/2022	6/3/2022	3.50	39.00	-	42.50	0.0385%	0.0164
EFT	THINK POWER SOLUTIONS LLC	2/22/2022	4/7/2022	837.71	1/17/2022	1/30/2022	7.00	67.00	-	74.00	0.0458%	0.0339
EFT	BRANDSAFWAY INDUSTRIES LLC	3/22/2022	5/5/2022	979.50	3/14/2022	3/20/2022	3.50	46.00	-	49.50	0.0536%	0.0265
EFT	FISHER SCIENTIFIC LLC	10/6/2021	11/18/2021	367.42	10/5/2021	10/5/2021	0.50	44.00	-	44.50	0.0201%	0.0089
EFT	EQUIPMENT DEPOT	7/27/2021	10/13/2021	205.57	7/12/2021	7/12/2021	0.50	93.00	-	93.50	0.0112%	0.0105
EFT	FRANKLIN IMAGING	7/5/2022	8/3/2022	495.00	6/1/2022	6/30/2022	15.00	34.00	-	49.00	0.0271%	0.0133
EFT	DAVEY TREE EXPERT COMPANY	3/26/2022	5/9/2022	873.80	3/20/2022	3/26/2022	3.50	44.00	-	47.50	0.0478%	0.0227
EFT	CAPITAL RESULTS	2/19/2022	3/9/2022	2,975.00	1/1/2022	1/31/2022	15.50	37.00	-	52.50	0.1628%	0.0855
EFT	LHOIST NORTH AMERICA OF MISSOURI INC	2/9/2022	3/8/2022	5,474.56	2/7/2021	2/7/2021	0.50	394.00	-	394.50	0.2996%	1.1819
EFT	LHOIST NORTH AMERICA OF MISSOURI INC	4/12/2021	11/22/2021	9,170.91	4/1/2021	4/9/2021	4.50	227.00	-	231.50	0.5019%	1.1618
EFT	ENERFAB INC	10/8/2021	11/19/2021	5,192.14	9/25/2021	10/1/2021	3.50	49.00	-	52.50	0.2841%	0.1492
EFT	ENERFAB INC	6/16/2022	7/28/2022	1,914.00	6/6/2022	6/10/2022	2.50	48.00	-	50.50	0.1047%	0.0529
EFT	DAVEY TREE EXPERT COMPANY	7/2/2022	9/14/2022	1,448.70	6/26/2022	7/2/2022	3.50	74.00	-	77.50	0.0793%	0.0614
EFT	UNITED RENTALS (NORTH AMERICA)	8/26/2021	10/27/2021	2,752.68	7/28/2021	8/25/2021	14.50	63.00	-	77.50	0.1506%	0.1167
EFT	MATHESON TRI-GAS INC	1/31/2022	3/16/2022	1,493.03	1/31/2022	1/31/2022	0.50	44.00	-	44.50	0.0817%	0.0364
EFT	STEPTOE & JOHNSON	1/19/2022	2/17/2022	1,162.80	12/1/2021	12/29/2021	14.50	50.00	-	64.50	0.0636%	0.0410
EFT	JACKSON KELLY PLLC	2/14/2022	3/15/2022	1,558.46	1/3/2022	1/26/2022	12.00	48.00	-	60.00	0.0853%	0.0512
CHK	UNIVAR SOLUTIONS USA INC	12/8/2021	2/17/2022	3,140.68	12/8/2021	12/8/2021	0.50	71.00	12.73	84.23	0.1719%	0.1448
EFT	STRUCTSURE SCAFFOLD SOLUTIONS	1/5/2022	2/17/2022	1,302.72	12/27/2021	1/2/2022	3.50	46.00	-	49.50	0.0713%	0.0353
EFT	ASPLUNDH TREE EXPERT LLC	3/19/2022	5/20/2022	3,608.23	3/13/2022	3/19/2022	3.50	62.00	-	65.50	0.1975%	0.1293
EFT	MPW ENVIRONMENTAL SERVICES	5/26/2022	7/7/2022	3,645.60	5/9/2022	5/9/2022	0.50	59.00	-	59.50	0.1995%	0.1187
EFT	STEPTOE & JOHNSON	2/14/2022	3/15/2022	4,560.09	1/1/2022	1/31/2022	15.50	43.00	-	58.50	0.2495%	0.1460
EFT	NELSON TREE SERVICE LLC	12/31/2021	2/11/2022	5,742.40	12/26/2021	12/31/2021	3.00	42.00	-	45.00	0.3142%	0.1414
EFT	ASPLUNDH TREE EXPERT LLC	8/27/2022	10/10/2022	2,041.00	8/21/2022	8/27/2022	3.50	44.00	-	47.50	0.1117%	0.0531
EFT	BRANDSAFWAY INDUSTRIES LLC	12/21/2021	2/3/2022	1,021.93	12/6/2021	12/12/2021	3.50	53.00	-	56.50	0.0559%	0.0316
EFT	COLEMAN LAWN & LANDSCAPING LLC	6/1/2022	7/21/2022	2,137.01	5/1/2022	5/24/2022	12.00	58.00	-	70.00	0.1169%	0.0819
EFT	BRANDSAFWAY INDUSTRIES LLC	11/9/2021	12/21/2021	7,592.23	11/1/2021	11/7/2021	3.50	44.00	-	47.50	0.4155%	0.1973
EFT	ENERFAB INC	11/18/2021	12/29/2021	1,419.15	11/12/2021	11/12/2021	0.50	47.00	-	47.50	0.0777%	0.0369
EFT	BRANDSAFWAY INDUSTRIES LLC	8/31/2022	10/13/2022	1,190.84	8/22/2022	8/28/2022	3.50	46.00	-	49.50	0.0652%	0.0323
EFT	PVS CHEMICAL INC	10/28/2021	12/22/2021	4,351.57	10/28/2021	10/28/2021	0.50	55.00	-	55.50	0.2381%	0.1322
EFT	ENERFAB INC	1/13/2022	2/24/2022	4,372.19	1/1/2022	1/7/2022	3.50	48.00	-	51.50	0.2393%	0.1232
EFT	HAMILTON, GEO V INC	11/4/2021	11/11/2021	7,227.14	10/18/2021	10/24/2021	3.50	18.00	-	21.50	0.3955%	0.0850
EFT	EKATO INC	4/19/2022	6/2/2022	8,293.25	4/19/2022	4/19/2022	0.50	44.00	-	44.50	0.4538%	0.2020
EFT	MPW ENVIRONMENTAL SERVICES	7/7/2022	8/18/2022	5,513.88	6/20/2022	6/24/2022	2.50	55.00	-	57.50	0.3017%	0.1735
EFT	ACUITY LIGHTING GROUP	7/5/2022	8/18/2022	3,637.50	7/5/2022	7/5/2022	0.50	44.00	-	44.50	0.1991%	0.0886
EFT	ARBORMETRICS SOLUTIONS INC	4/23/2022	6/28/2022	1,998.00	4/17/2022	4/23/2022	3.50	66.00	-	69.50	0.1093%	0.0760
CHK	GREENUP BEACON	9/29/2021	10/27/2021	1,500.00	1/1/2021	12/31/2021	182.50	(65.00)	12.73	130.23	0.0821%	0.1069

Payment Method	Supplier Name	Invoice Date	Payment Date	Invoice Amount	Service Start Date	Service End Date	Service Lead Time	Payment Lead Time	Bank Float	Total Lead Time	Weighting Factor	Weighted Lead Time
EFT	HAMILTON, GEO V INC	10/14/2021	10/21/2021	1,147.37	9/27/2021	10/3/2021	3.50	18.00	-	21.50	0.0628%	0.0135
EFT	VEGA AMERICAS INC	10/26/2021	12/9/2021	2,607.00	10/22/2021	10/22/2021	0.50	48.00	-	48.50	0.1427%	0.0692
EFT	HURLEY ELECTRICAL CONTRACTING LLC	4/25/2022	6/27/2022	5,310.00	4/21/2022	4/21/2022	0.50	67.00	-	67.50	0.2906%	0.1961
EFT	ENERFAB INC	9/30/2021	11/11/2021	2,719.16	9/30/2021	9/30/2021	0.50	42.00	-	42.50	0.1488%	0.0632
EFT	ASPLUNDH TREE EXPERT LLC	8/20/2022	10/3/2022	2,554.32	8/14/2022	8/20/2022	3.50	44.00	-	47.50	0.1398%	0.0664
EFT	SIEMENS INDUSTRY INC	1/27/2022	3/10/2022	2,006.99	1/21/2022	1/21/2022	0.50	48.00	-	48.50	0.1098%	0.0533
EFT	EMAR CORPORATION	8/16/2022	9/29/2022	2,232.87	8/11/2022	8/11/2022	0.50	49.00	-	49.50	0.1222%	0.0605
EFT	STAHURA CONVEYOR PRODUCTS INC	2/17/2022	3/11/2022	2,492.00	2/17/2022	2/17/2022	0.50	22.00	-	22.50	0.1364%	0.0307
EFT	NORTHEAST KENTUCKY COMMUNITY ACTION	9/14/2022	9/16/2022	8,710.51	8/1/2022	8/31/2022	15.50	16.00	-	31.50	0.4767%	0.1501
EFT	WRIGHT TREE SVC	2/19/2022	4/4/2022	4,387.70	2/13/2022	2/19/2022	3.50	44.00	-	47.50	0.2401%	0.1141
EFT	MPW ENVIRONMENTAL SERVICES	4/14/2022	5/26/2022	2,617.20	3/22/2022	3/24/2022	1.50	63.00	-	64.50	0.1432%	0.0924
EFT	LITMAN ENTERPRISES LLC	8/6/2021	10/27/2021	1,275.00	8/6/2021	8/6/2021	0.50	82.00	-	82.50	0.0698%	0.0576
EFT	STRUCTSURE SCAFFOLD SOLUTIONS	12/22/2021	2/3/2022	1,253.20	12/13/2021	12/19/2021	3.50	46.00	-	49.50	0.0686%	0.0339
EFT	REO PROCESSING INC	3/1/2022	6/1/2022	1,645.12	3/1/2022	3/31/2022	15.50	62.00	-	77.50	0.0900%	0.0698
EFT	MANSFIELD OIL CORP	3/23/2022	5/2/2022	7,913.99	3/23/2022	3/23/2022	0.50	40.00	-	40.50	0.4331%	0.1754
EFT	MATHESON TRI-GAS INC	6/30/2022	9/19/2022	1,332.37	6/30/2022	6/30/2022	0.50	81.00	-	81.50	0.0729%	0.0594
EFT	MOTION INDUSTRIES INC	5/18/2022	6/30/2022	1,190.35	5/18/2022	5/18/2022	0.50	43.00	-	43.50	0.0651%	0.0283
EFT	ASPLUNDH TREE EXPERT LLC	7/9/2022	8/22/2022	1,308.75	7/3/2022	7/9/2022	3.50	44.00	-	47.50	0.0716%	0.0340
EFT	ALLIED UNIVERSAL SECURITY SERVICES	3/3/2022	3/31/2022	5,082.75	2/18/2022	3/3/2022	7.00	28.00	-	35.00	0.2781%	0.0973
EFT	NEUNDORFER INCORPORATED	2/21/2022	4/6/2022	6,885.00	2/21/2022	2/21/2022	0.50	44.00	-	44.50	0.3768%	0.1677
EFT	ITS TECHNOLOGIES INC	6/12/2022	7/21/2022	1,000.00	6/4/2022	6/10/2022	3.50	41.00	-	44.50	0.0547%	0.0244
EFT	DAVEY TREE EXPERT COMPANY	1/8/2022	2/21/2022	4,179.20	1/2/2022	1/8/2022	3.50	44.00	-	47.50	0.2287%	0.1086
EFT	MPW ENVIRONMENTAL SERVICES	3/24/2022	5/5/2022	1,716.60	3/8/2022	3/8/2022	0.50	58.00	-	58.50	0.0939%	0.0550
EFT	BELLAIRE HARBOR SERVICES LLC	6/17/2022	7/6/2022	1,269.55	6/13/2022	6/17/2022	2.50	19.00	-	21.50	0.0695%	0.0149
EFT	DAVEY TREE EXPERT COMPANY	2/5/2022	3/21/2022	1,868.40	1/30/2022	2/5/2022	3.50	44.00	-	47.50	0.1022%	0.0486
EFT	TYNDALE COMPANY INC	12/3/2021	3/25/2022	1,091.80	11/30/2021	11/30/2021	0.50	115.00	-	115.50	0.0597%	0.0690
EFT	ENERFAB INC	7/7/2022	8/18/2022	1,435.50	7/1/2022	7/1/2022	0.50	48.00	-	48.50	0.0786%	0.0381
EFT	TYNDALE COMPANY INC	7/3/2022	8/16/2022	1,687.90	6/9/2022	7/1/2022	11.50	46.00	-	57.50	0.0924%	0.0531
EFT	HAMILTON, GEO V INC	7/26/2022	8/4/2022	3,225.72	7/11/2022	7/17/2022	3.50	18.00	-	21.50	0.1765%	0.0380
EFT	ENERFAB INC	2/8/2022	3/24/2022	4,777.45	1/29/2022	2/4/2022	3.50	48.00	-	51.50	0.2614%	0.1346
EFT	ENERFAB INC	1/20/2022	3/3/2022	5,450.57	1/8/2022	1/14/2022	3.50	48.00	-	51.50	0.2983%	0.1536
EFT	UNITED RENTALS (NORTH AMERICA)	12/12/2021	2/2/2022	6,207.40	11/26/2021	12/24/2021	14.50	40.00	-	54.50	0.3397%	0.1851
EFT	ASPLUNDH TREE EXPERT LLC	3/5/2022	4/18/2022	3,780.82	2/27/2022	3/5/2022	3.50	44.00	-	47.50	0.2069%	0.0983
EFT	CROWN PRODUCTS & SERVICES LLC	5/18/2022	6/30/2022	3,300.00	5/18/2022	5/18/2022	0.50	43.00	-	43.50	0.1806%	0.0786
EFT	STRUCTSURE SCAFFOLD SOLUTIONS	8/17/2022	9/29/2022	2,373.28	8/8/2022	8/14/2022	3.50	46.00	-	49.50	0.1299%	0.0643
EFT	MANSFIELD OIL CORP	1/16/2022	1/28/2022	2,739.48	1/16/2022	1/16/2022	0.50	12.00	-	12.50	0.1499%	0.0187
EFT	MESA ASSOCIATES INC	10/22/2021	12/3/2021	1,194.92	9/1/2021	9/30/2021	15.00	64.00	-	79.00	0.0654%	0.0517
EFT	TRC ENGINEERS INC	10/23/2021	12/6/2021	1,966.25	10/17/2021	10/23/2021	3.50	44.00	-	47.50	0.1076%	0.0511
EFT	BELLAIRE HARBOR SERVICES LLC	1/21/2022	2/9/2022	1,903.82	1/17/2022	1/21/2022	2.50	19.00	-	21.50	0.1042%	0.0224
EFT	TRC ENVIRONMENTAL CORPORATION	3/18/2022	4/29/2022	1,795.29	3/7/2022	3/11/2022	2.50	49.00	-	51.50	0.0982%	0.0506
EFT	BRANDSAFWAY INDUSTRIES LLC	6/14/2022	7/28/2022	1,854.57	6/6/2022	6/12/2022	3.50	46.00	-	49.50	0.1015%	0.0502
EFT	ASPLUNDH TREE EXPERT LLC	8/27/2022	10/10/2022	2,304.70	8/21/2022	8/27/2022	3.50	44.00	-	47.50	0.1261%	0.0599
EFT	NELSON TREE SERVICE LLC	7/23/2022	9/6/2022	1,721.16	7/17/2022	7/23/2022	3.50	45.00	-	48.50	0.0942%	0.0457
EFT	ASPLUNDH TREE EXPERT LLC	6/18/2022	8/1/2022	5,390.63	6/12/2022	6/18/2022	3.50	44.00	-	47.50	0.2950%	0.1401
EFT	STAHURA CONVEYOR PRODUCTS INC	10/29/2021	12/10/2021	5,297.50	10/6/2021	10/6/2021	0.50	65.00	-	65.50	0.2899%	0.1899
EFT	MANSFIELD OIL CORP	2/21/2022	5/2/2022	2,872.95	2/21/2022	2/21/2022	0.50	70.00	-	70.50	0.1572%	0.1108
EFT	GULF COASTAL SERVICES	11/30/2021	1/13/2022	3,950.00	11/30/2021	11/30/2021	0.50	44.00	-	44.50	0.2162%	0.0962
EFT	DAVEY TREE EXPERT COMPANY	4/16/2022	6/16/2022	3,588.80	4/10/2022	4/16/2022	3.50	61.00	-	64.50	0.1964%	0.1267
EFT	NALCO COMPANY LLC	5/12/2022	6/23/2022	2,639.62	5/12/2022	5/12/2022	0.50	42.00	-	42.50	0.1444%	0.0614
EFT	BELLAIRE HARBOR SERVICES LLC	2/11/2022	3/2/2022	1,260.65	2/7/2022	2/11/2022	2.50	19.00	-	21.50	0.0690%	0.0148
EFT	ITS TECHNOLOGIES INC	8/6/2022	9/14/2022	1,037.16	7/30/2022	8/5/2022	3.50	40.00	-	43.50	0.0568%	0.0247
EFT	ASPLUNDH TREE EXPERT LLC	7/16/2022	8/29/2022	8,820.99	7/10/2022	7/16/2022	3.50	44.00	-	47.50	0.4827%	0.2293
EFT	BRANDSAFWAY INDUSTRIES LLC	7/19/2022	9/2/2022	3,192.30	7/11/2022	7/17/2022	3.50	47.00	-	50.50	0.1747%	0.0882
EFT	CRYOGENIC GAS	8/16/2021	10/25/2021	1,321.68	8/11/2021	8/11/2021	0.50	75.00	-	75.50	0.0723%	0.0546
EFT	ASPLUNDH TREE EXPERT LLC	10/30/2021	12/13/2021	5,232.55	12/17/2021	12/23/2021	3.50	(10.00)	-	(6.50)	0.2863%	(0.0186)
EFT	WRIGHT TREE SVC	7/23/2022	9/6/2022	1,391.80	7/17/2022	7/23/2022	3.50	45.00	-	48.50	0.0762%	0.0369
EFT	ALLIED UNIVERSAL SECURITY SERVICES	4/28/2022	5/26/2022	5,409.21	4/15/2022	4/28/2022	7.00	28.00	-	35.00	0.2960%	0.1036
EFT	UNITED RENTALS (NORTH AMERICA)	6/26/2022	8/9/2022	1,350.00	6/10/2022	7/8/2022	14.50	32.00	-	46.50	0.0739%	0.0344
EFT	ASPLUNDH TREE EXPERT LLC	6/25/2022	8/17/2022	1,532.10	6/19/2022	6/25/2022	3.50	53.00	-	56.50	0.0838%	0.0474
EFT	BEAR COMMUNICATIONS INC	2/2/2022	3/17/2022	1,294.00	2/2/2022	3/1/2022	14.00	16.00	-	30.00	0.0708%	0.0212
EFT	UNITED ELECTRIC	9/30/2021	11/11/2021	1,569.97	9/27/2021	10/3/2021	3.50	39.00	-	42.50	0.0859%	0.0365
EFT	HAMILTON, GEO V INC	8/5/2022	8/12/2022	1,122.00	8/4/2022	8/4/2022	0.50	8.00	-	8.50	0.0614%	0.0052
EFT	HAMILTON, GEO V INC	12/21/2021	12/30/2021	4,209.98	12/6/2021	12/12/2021	3.50	18.00	-	21.50	0.2304%	0.0495
EFT	CHEMTREAT INC	11/10/2021	12/20/2021	8,232.00	11/10/2021	11/10/2021	0.50	40.00	-	40.50	0.4505%	0.1824
EFT	DAILY INDEPENDENT	5/31/2022	6/30/2022	1,200.00	5/1/2022	5/31/2022	15.50	30.00	-	45.50	0.0657%	0.0299
EFT	BELLAIRE HARBOR SERVICES LLC	6/10/2022	6/29/2022	2,271.85	6/6/2022	6/10/2022	2.50	19.00	-	21.50	0.1243%	0.0267
EFT	STRUCTSURE SCAFFOLD SOLUTIONS	3/11/2022	4/22/2022	1,018.15	2/28/2022	3/6/2022	3.50	47.00	-	50.50	0.0557%	0.0281
EFT	ROADSAFE TRAFFIC SYSTEMS INC	10/16/2021	11/29/2021	4,075.00	10/10/2021	10/16/2021	3.50	44.00	-	47.50	0.2230%	0.1059
EFT	UNITED ELECTRIC	12/30/2021	2/10/2022	2,021.25	12/27/2021	1/2/2022	3.50	39.00	-	42.50	0.1106%	0.0470
EFT	NELSON TREE SERVICE LLC	7/2/2022	8/15/2022	7,082.00	6/26/2022	7/2/2022	3.50	44.00	-	47.50	0.3875%	0.1841
EFT	STRUCTSURE SCAFFOLD SOLUTIONS	5/5/2022	6/16/2022	4,283.25	4/25/2022	5/1/2022	3.50	46.00	-	49.50	0.2344%	0.1160
EFT	ASPLUNDH TREE EXPERT LLC	4/9/2022	5/23/2022	1,983.01	4/3/2022	4/9/2022	3.50	44.00	-	47.50	0.1085%	0.0515
EFT	SERVICE PUMP & SUPPLY INC	3/30/2022	5/12/2022	2,180.00	1/28/2022	1/28/2022	0.50	104.00	-	104.50	0.1193%	0.1247
EFT	ARBORMETRICS SOLUTIONS INC	2/5/2022	3/21/2022	3,796.80	1/30/2022	2/5/2022	3.50	44.00	-	47.50	0.2078%	0.0987
EFT	ALLIED UNIVERSAL SECURITY SERVICES	9/19/2021	10/18/2021	4,677.47	9/6/2021	9/19/2021	7.00	29.00	-	36.00	0.2560%	0.0921
EFT	BRANDSAFWAY INDUSTRIES LLC	3/14/2022	4/27/2022	1,370.12	3/7/2022	3/13/2022	3.50	45.00	-	48.50	0.0750%	0.0364
EFT	ARBORMETRICS SOLUTIONS INC	8/27/2022	10/10/2022	1,943.61	8/21/2022	8/27/2022	3.50	44.00	-	47.50	0.1064%	0.0505
EFT	STRUCTSURE SCAFFOLD SOLUTIONS	2/23/2022	4/7/2022	1,183.92	2/14/2022	2/20/2022	3.50	46.00	-	49.50	0.0648%	0.0321
EFT	MPW ENVIRONMENTAL SERVICES	9/8/2022	10/20/2022	1,822.80	8/15/2022	8/15/2022	0.50	66.00	-	66.50	0.0997%	0.0663
EFT	ENERFAB INC	3/25/2022	5/6/2022	1,327.15	3/12/2022	3/12/2022	0.50	55.00	-	55.50	0.0726%	0.0403
EFT	ARBORMETRICS SOLUTIONS INC	8/20/2022	10/3/2022	4,940.61	8/14/2022	8/20/2022	3.50	44.00	-	47.50	0.2704%	0.1284
EFT	DAVEY TREE EXPERT COMPANY	6/18/2022	8/1/2022	2,209.60	6/12/2022	6/18/2022	3.50	44.00	-	47.50	0.1209%	0.0574
CHK	CAPITAL ELECTRIC	2/16/2022	4/20/2022	1,408.00	2/16/2022	2/16/2022	0.50	63.00	12.73	76.23	0.0770%	0.0587
EFT	CLEVELAND BROTHERS EQUIPMENT C	4/14/2022	6/2/2022	2,604.94	2/24/2022	4/1/2022	18.50	62.00	-	80.50	0.1425%	0.1148
EFT	ASPLUNDH TREE EXPERT LLC	10/16/2021	11/29/2021	2,866.72	10/10/2021	10/16/2021	3.50	44.00	-	47.50	0.1569%	0.0745
EFT	ASPLUNDH TREE EXPERT LLC	12/11/2021	1/24/2022	8,497.09	12/5/2021	12/11/2021	3.50	44.00	-	47.50	0.4650%	0.2209
EFT	RAMBOLL US CONSULTING	5/19/2022	6/30/2022	2,200.00	4/1/2022	4/30/2022	15.00	61.00	-	76.00	0.1204%	0.0915
EFT	SUMMIT HELICOPTERS INC	6/28/2022	9/15/2022	3,530.00	6/26/2022	6/27/2022	1.00	80.00	-	81.00	0.1932%	0.1565
EFT	ROADSAFE TRAFFIC SYSTEMS INC	10/9/2021	11/22/2021	3,056.25	10/3/2021	10/9/2021	3.50	44.00	-	47.50	0.1672%	0.0794
EFT	ARBORMETRICS SOLUTIONS INC	11/6/2021	1/3/2022	6,285.04	10/31/2021	11/6/2021	3.50	58.00	-	61.50	0.3439%	0.2115
EFT	DAVEY TREE EXPERT COMPANY	11/20/2021	1/3/2022	5,508.84	11/17/2021	11/20/2021	2.00	44.00	-	46.00	0.3015%	0.1387
EFT	BRANDSAFWAY INDUSTRIES LLC	8/18/2022	9/29/2022	1,707.23	8/8/2022	8/14/2022	3.50	46.00	-	49.50	0.0934%	0.0462
EFT	NEUMANN H E CO	8/30/2022	10/13/2022	1,946.00	8/26/2022	8/26/2022	0.50	48.00	-	48.50	0.1065%	0.0516
EFT	BRANDSAFWAY INDUSTRIES LLC	7/26/2022	9/8/2022	1,328.11	7/18/2022	7/24/2022	3.50	46.00	-	49.50	0.0727%	0.0360
EFT	BRANDSAFWAY INDUSTRIES LLC	1/11/2022	2/24/2022	3,318.71	1/3/2022	1/9/2022	3.50	46.00	-	49.50	0.1816%	0.0899
EFT	DAVEY TREE EXPERT COMPANY	4/30/2022	6/13/2022	1,931.60	4/24/2022	4/30/2022	3.50	44.00	-	47.50	0.1057%	0.0502
EFT	EMERSON PROCESS MANAGEMENT LLLP	3/10/2022	4/21/2022	8,686.96	3/10/2022	12/31/2022	148.50	(254.00)	-	(105.50)	0.4754%	(0.5015)
EFT	BRANDSAFWAY INDUSTRIES LLC	9/8/2021	10/21/2021	3,825.71	8/30/2021	9/5/2021	3.50	46.00	-	49.50	0.2094%	0.1036
EFT	ENERFAB INC	2/8/2022	3/24/2022	6,424.65	1/29/2022	2/4/2022	3.50	48.00	-	51.50	0.3516%	0.1811
EFT	BRANDSAFWAY INDUSTRIES LLC	2/8/2022	3/24/2022	1,062.40	1/31/2022	2/6/2022	3.50	46.00	-	49.50	0.0581%	0.0288

Payment Method	Supplier Name	Invoice Date	Payment Date	Invoice Amount	Service Start Date	Service End Date	Service Lead Time	Payment Lead Time	Bank Float	Total Lead Time	Weighting Factor	Weighted Lead Time
EFT	HITACHI ENERGY USA INC	9/9/2021	2/9/2022	4,541.66	9/9/2021	9/9/2021	0.50	153.00	-	153.50	0.2485%	0.3815
EFT	HAMILTON, GEO V INC	11/8/2021	11/17/2021	1,023.13	10/25/2021	10/31/2021	3.50	17.00	-	20.50	0.0560%	0.0115
EFT	ASPLUNDH TREE EXPERT LLC	7/2/2022	8/15/2022	8,596.85	6/26/2022	7/2/2022	3.50	44.00	-	47.50	0.4704%	0.2235
EFT	ALLIED UNIVERSAL SECURITY SERVICES	10/28/2021	12/30/2021	7,172.10	10/15/2021	10/28/2021	7.00	63.00	-	70.00	0.3925%	0.2747
EFT	ENERFAB INC	3/11/2022	4/22/2022	6,210.62	2/26/2022	3/4/2022	3.50	49.00	-	52.50	0.3399%	0.1784
EFT	HANNON ELECTRIC CO	3/18/2022	3/25/2022	2,977.08	3/18/2022	3/18/2022	0.50	7.00	-	7.50	0.1629%	0.0122
EFT	MOTION INDUSTRIES INC	9/30/2021	11/11/2021	3,730.30	9/30/2021	9/30/2021	0.50	42.00	-	42.50	0.2041%	0.0868
EFT	HUGHES PRIMEAU CONTROLS	12/28/2021	1/11/2022	2,247.75	1/5/2022	1/5/2022	0.50	6.00	-	6.50	0.1230%	0.0080
CHK	ADVANCED INDUSTRIAL PRODUCTS	3/4/2022	4/18/2022	1,060.00	3/4/2022	3/4/2022	0.50	45.00	12.73	58.23	0.0580%	0.0338
EFT	DAVEY TREE EXPERT COMPANY	11/20/2021	1/13/2022	1,747.60	11/14/2021	11/20/2021	3.50	54.00	-	57.50	0.0956%	0.0550
EFT	GEOSYNTEC CONSULTANTS	3/1/2022	4/13/2022	5,254.85	1/1/2022	1/31/2022	15.50	72.00	-	87.50	0.2876%	0.2516
EFT	ASPLUNDH TREE EXPERT LLC	2/5/2022	3/21/2022	1,790.07	1/30/2022	2/5/2022	3.50	44.00	-	47.50	0.0980%	0.0465
EFT	ENERFAB INC	12/29/2021	2/10/2022	6,032.21	12/18/2021	12/24/2021	3.50	48.00	-	51.50	0.3301%	0.1700
EFT	BERRY NETWORK INC	6/10/2022	6/15/2022	1,084.46	5/1/2022	11/30/2023	289.50	(533.00)	-	(243.50)	0.0593%	(0.1445)
EFT	M&C PRODUCTS	6/2/2021	2/22/2022	2,579.20	3/16/2021	3/16/2021	0.50	343.00	-	343.50	0.1411%	0.4848
CHK	HARTFORD STEAM BOILER AND INSP	4/8/2022	5/6/2022	1,210.89	3/15/2022	3/15/2022	0.50	52.00	12.73	65.23	0.0663%	0.0432
EFT	BRANDSAFWAY INDUSTRIES LLC	8/10/2022	9/22/2022	1,039.05	8/1/2022	8/7/2022	3.50	46.00	-	49.50	0.0569%	0.0281
EFT	BELLAIRE HARBOR SERVICES LLC	8/12/2022	8/31/2022	3,781.90	8/8/2022	8/12/2022	2.50	19.00	-	21.50	0.2070%	0.0445
EFT	QUALITY ENVIRONMENTAL SERVICES	6/1/2022	7/20/2022	3,157.53	5/8/2022	5/14/2022	3.50	67.00	-	70.50	0.1728%	0.1218
EFT	MPW ENVIRONMENTAL SERVICES	12/22/2021	2/3/2022	2,431.62	12/9/2021	12/9/2021	0.50	56.00	-	56.50	0.1331%	0.0752
EFT	DAVEY TREE EXPERT COMPANY	10/30/2021	12/13/2021	1,868.40	10/26/2021	10/30/2021	2.50	44.00	-	46.50	0.1022%	0.0475
EFT	UNITED ELECTRIC	6/9/2022	7/29/2022	6,576.50	6/6/2022	6/12/2022	3.50	47.00	-	50.50	0.3599%	0.1817
EFT	NALCO COMPANY LLC	1/31/2022	3/16/2022	36,673.20	1/31/2022	1/31/2022	0.50	44.00	-	44.50	2.0069%	0.8930
CHK	KENTUCKY CHAMBER OF COMMERCE	12/30/2021	1/3/2022	23,417.50	12/1/2021	11/30/2022	182.50	(331.00)	12.73	(135.77)	1.2815%	(1.7399)
EFT	ENERFAB INC	11/17/2021	1/28/2022	26,081.40	10/30/2021	11/5/2021	3.50	84.00	-	87.50	1.4272%	1.2488
EFT	ENERFAB INC	11/4/2021	12/16/2021	12,543.12	10/23/2021	10/29/2021	3.50	48.00	-	51.50	0.6864%	0.3535
EFT	SUMMIT HELICOPTERS INC	8/6/2022	9/19/2022	30,649.50	7/31/2022	8/6/2022	3.50	44.00	-	47.50	1.6772%	0.7967
EFT	ASPLUNDH TREE EXPERT LLC	2/26/2022	4/11/2022	39,450.49	2/20/2022	2/26/2022	3.50	44.00	-	47.50	2.1588%	1.0254
EFT	NELSON TREE SERVICE LLC	7/23/2022	9/2/2022	10,669.20	7/17/2022	7/23/2022	3.50	41.00	-	44.50	0.5838%	0.2598
CHK	UNIVAR SOLUTIONS USA INC	2/11/2022	3/28/2022	10,230.00	2/11/2022	2/11/2022	0.50	45.00	12.73	58.23	0.5598%	0.3260
EFT	VALVE RECONDITIONING SERVICE C	11/10/2021	12/21/2021	11,430.00	10/9/2021	11/21/2021	22.00	30.00	-	52.00	0.6255%	0.3252
EFT	JERGENS, R B CONTRACTORS INC	5/19/2022	6/30/2022	10,588.72	4/1/2022	4/30/2022	15.00	61.00	-	76.00	0.5794%	0.4404
EFT	SOLVAY CHEMICALS INC	12/31/2021	1/18/2022	13,584.79	12/20/2021	12/22/2021	1.50	27.00	-	28.50	0.7434%	0.2119
EFT	ENERFAB INC	12/29/2021	2/10/2022	14,814.60	12/18/2021	12/24/2021	3.50	48.00	-	51.50	0.8107%	0.4175
EFT	JERGENS, R B CONTRACTORS INC	11/12/2021	12/22/2021	11,698.61	10/1/2021	10/31/2021	15.50	52.00	-	67.50	0.6402%	0.4321
EFT	ASPLUNDH TREE EXPERT LLC	11/13/2021	1/3/2022	44,170.13	11/7/2021	11/13/2021	3.50	51.00	-	54.50	2.4171%	1.3173
EFT	LHOIST NORTH AMERICA OF MISSOURI INC	6/20/2022	7/15/2022	15,943.09	6/17/2020	6/20/2022	367.00	25.00	-	392.00	0.8724%	3.4200
EFT	ASPLUNDH TREE EXPERT LLC	12/18/2021	1/31/2022	11,661.25	12/12/2021	12/18/2021	3.50	44.00	-	47.50	0.6381%	0.3031
EFT	HAVERFIELD INTERNATIONAL INC	12/15/2021	1/27/2022	18,190.72	2/19/2021	2/19/2021	0.50	342.00	-	342.50	0.9954%	3.4094
EFT	UNITED ELECTRIC	11/19/2021	12/30/2021	10,249.58	12/27/2021	1/2/2022	3.50	(3.00)	-	0.50	0.5609%	0.0028
EFT	ENERFAB INC	12/17/2021	1/28/2022	11,985.67	11/27/2021	12/3/2021	3.50	56.00	-	59.50	0.6559%	0.3903
CHK	CASEY, LYNDI	4/8/2022	4/11/2022	10,000.00	4/8/2022	4/8/2022	0.50	3.00	12.73	16.23	0.5472%	0.0888
EFT	AERIAL SOLUTIONS INC	10/30/2021	12/13/2021	49,549.00	10/25/2021	10/31/2021	3.50	43.00	-	46.50	2.7115%	1.2608
EFT	LHOIST NORTH AMERICA OF MISSOURI INC	1/26/2022	2/22/2022	11,038.85	1/21/2022	1/25/2022	2.50	28.00	-	30.50	0.6041%	0.1842
EFT	NELSON TREE SERVICE LLC	1/15/2022	2/28/2022	21,377.10	1/9/2022	1/15/2022	3.50	44.00	-	47.50	1.1698%	0.5557
CHK	UNIVAR SOLUTIONS USA INC	12/15/2021	1/28/2022	10,230.00	12/15/2021	12/15/2021	0.50	44.00	12.73	57.23	0.5598%	0.3204
EFT	CAPITAL RESULTS	10/30/2021	1/3/2022	32,665.77	10/1/2021	10/31/2021	15.50	64.00	-	79.50	1.7876%	1.4211
EFT	JERGENS, R B CONTRACTORS INC	11/12/2021	12/22/2021	16,068.25	10/1/2021	10/31/2021	15.50	52.00	-	67.50	0.8793%	0.5935
EFT	INDUSTRIAL HELICOPTERS INC	5/21/2022	7/1/2022	10,860.00	5/15/2022	5/21/2022	3.50	41.00	-	44.50	0.5943%	0.2645
EFT	PACE ANALYTICAL SERVICES LLC	8/31/2022	10/13/2022	16,092.84	7/25/2022	7/25/2022	0.50	80.00	-	80.50	0.8806%	0.7089
EFT	PORTERSVILLE PRD LLC	12/6/2021	1/19/2022	50,163.50	10/25/2021	11/12/2021	9.50	68.00	-	77.50	2.7451%	2.1274
EFT	SUMMIT HELICOPTERS INC	8/6/2022	9/28/2022	50,595.75	7/31/2022	8/6/2022	3.50	53.00	-	56.50	2.7687%	1.5643
EFT	AERIAL SOLUTIONS INC	12/18/2021	1/31/2022	50,674.50	12/12/2021	12/18/2021	3.50	44.00	-	47.50	2.7730%	1.3172
EFT	FISERV INC	7/11/2022	7/14/2022	51,003.66	6/1/2022	6/30/2022	15.00	14.00	-	29.00	2.7911%	0.8094
EFT	HAVERFIELD INTERNATIONAL INC	11/11/2021	12/21/2021	51,170.00	9/6/2021	9/8/2021	1.50	104.00	-	105.50	2.8002%	2.9542
EFT	ASPLUNDH TREE EXPERT LLC	6/25/2022	8/17/2022	51,239.13	6/19/2022	6/25/2022	3.50	53.00	-	56.50	2.8039%	1.5842
EFT	AERIAL SOLUTIONS INC	11/6/2021	12/20/2021	51,361.50	10/31/2021	11/6/2021	3.50	44.00	-	47.50	2.8106%	1.3351
EFT	WRIGHT TREE SVC	1/22/2022	3/30/2022	51,733.36	1/16/2022	1/22/2022	3.50	67.00	-	70.50	2.8310%	1.9958
EFT	WRIGHT TREE SVC	12/18/2021	2/4/2022	100,401.60	12/12/2021	12/18/2021	3.50	48.00	-	51.50	5.4942%	2.8295
EFT	ASPLUNDH TREE EXPERT LLC	12/25/2021	2/7/2022	101,097.04	12/19/2021	12/25/2021	3.50	44.00	-	47.50	5.5323%	2.6278
EFT	ASPLUNDH TREE EXPERT LLC	7/2/2022	8/15/2022	101,269.26	6/26/2022	7/2/2022	3.50	44.00	-	47.50	5.5417%	2.6323
				$ 1,827,397.74								58.4381

KENTUCKY POWER COMPANY
LEAD LAG STUDY
PURCHASED POWER

Weighted Lead Time: 27.92 days

Supplier Name	Payment Date	Invoice Amount	Service Start Date	Service End Date	Service Lead Time	Payment Lead Time	Total Lead Time	Weighting Factor	Weighted Lead Time	
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(k)
PJM	11/15/2021	$ 1,799,322.19	10/1/2021	10/31/2021	15.50	15.00	30.50	0.6411%	0.1955	**ACT**
PJM	11/15/2021	2,410,039.28	10/1/2021	10/31/2021	15.50	15.00	30.50	0.8587%	0.2619	**ACT**
AEG	11/8/2021	2,372,238.19	10/1/2021	10/31/2021	15.50	8.00	23.50	0.8452%	0.1986	**N/A**
AEG	11/8/2021	4,068,788.19	10/1/2021	10/31/2021	15.50	8.00	23.50	1.4497%	0.3407	**N/A**
PJM	11/15/2021	210.58	10/1/2021	10/31/2021	15.50	15.00	30.50	0.0001%	0.0000	**ACT**
PJM	11/15/2021	1,725.21	10/1/2021	10/31/2021	15.50	15.00	30.50	0.0006%	0.0002	**ACT**
AEG	11/8/2021	17,905.00	10/1/2021	10/31/2021	15.50	8.00	23.50	0.0064%	0.0015	**N/A**
AEG	11/8/2021	93,946.00	10/1/2021	10/31/2021	15.50	8.00	23.50	0.0335%	0.0079	**N/A**
AEG	11/8/2021	(159,500.00)	10/1/2021	10/31/2021	15.50	8.00	23.50	-0.0568%	(0.0134)	**N/A**
AEG	11/8/2021	(102,602.00)	10/1/2021	10/31/2021	15.50	8.00	23.50	-0.0366%	(0.0086)	**N/A**
PJM	11/15/2021	172,438.64	10/1/2021	10/31/2021	15.50	15.00	30.50	0.0614%	0.0187	**ACT**
PJM	11/15/2021	(115,587.33)	10/1/2021	10/31/2021	15.50	15.00	30.50	-0.0412%	(0.0126)	**ACT**
PJM	11/15/2021	70,815.60	10/1/2021	10/31/2021	15.50	15.00	30.50	0.0252%	0.0077	**ACT**
PJM	11/15/2021	(0.02)	10/1/2021	10/31/2021	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	11/15/2021	37,175.23	10/1/2021	10/31/2021	15.50	15.00	30.50	0.0132%	0.0040	**ACT**
PJM	11/15/2021	95.12	10/1/2021	10/31/2021	15.50	15.00	30.50	0.0000%	0.0000	**ACT**
PJM	11/15/2021	(16,859.37)	10/1/2021	10/31/2021	15.50	15.00	30.50	-0.0060%	(0.0018)	**ACT**
PJM	11/15/2021	(168.46)	10/1/2021	10/31/2021	15.50	15.00	30.50	-0.0001%	(0.0000)	**ACT**
PJM	11/15/2021	1,522,395.19	10/1/2021	10/31/2021	15.50	15.00	30.50	0.5424%	0.1654	**ACT**
PJM	11/15/2021	508,322.66	10/1/2021	10/31/2021	15.50	15.00	30.50	0.1811%	0.0552	**ACT**
PJM	11/15/2021	27,120.23	10/1/2021	10/31/2021	15.50	15.00	30.50	0.0097%	0.0029	**ACT**
PJM	11/15/2021	10,148.47	10/1/2021	10/31/2021	15.50	15.00	30.50	0.0036%	0.0011	**ACT**
PJM	11/15/2021	0.01	10/1/2021	10/31/2021	15.50	15.00	30.50	0.0000%	0.0000	**ACT**
PJM	11/15/2021	(2,678.17)	10/1/2021	10/31/2021	15.50	15.00	30.50	-0.0010%	(0.0003)	**ACT**
PJM	11/15/2021	9,770.03	10/1/2021	10/31/2021	15.50	15.00	30.50	0.0035%	0.0011	**ACT**
PJM	11/15/2021	0.16	10/1/2021	10/31/2021	15.50	15.00	30.50	0.0000%	0.0000	**ACT**
PJM	11/15/2021	1,355.99	10/1/2021	10/31/2021	15.50	15.00	30.50	0.0005%	0.0001	**ACT**
PJM	11/15/2021	472.14	10/1/2021	10/31/2021	15.50	15.00	30.50	0.0002%	0.0001	**ACT**
PJM	11/15/2021	9,375.17	10/1/2021	10/31/2021	15.50	15.00	30.50	0.0033%	0.0010	**ACT**
PJM	11/15/2021	30,006.55	10/1/2021	10/31/2021	15.50	15.00	30.50	0.0107%	0.0033	**ACT**
PJM	11/15/2021	(68.03)	10/1/2021	10/31/2021	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	11/15/2021	(2.06)	10/1/2021	10/31/2021	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	11/15/2021	233,354.28	10/1/2021	10/31/2021	15.50	15.00	30.50	0.0831%	0.0254	**ACT**
PJM	11/15/2021	15,358.75	10/1/2021	10/31/2021	15.50	15.00	30.50	0.0055%	0.0017	**ACT**
PJM	11/15/2021	0.30	10/1/2021	10/31/2021	15.50	15.00	30.50	0.0000%	0.0000	**ACT**
PJM	11/15/2021	45,245.95	10/1/2021	10/31/2021	15.50	15.00	30.50	0.0161%	0.0049	**ACT**
PJM	11/15/2021	(446.39)	10/1/2021	10/31/2021	15.50	15.00	30.50	-0.0002%	(0.0000)	**ACT**
PJM	11/15/2021	560,238.30	10/1/2021	10/31/2021	15.50	15.00	30.50	0.1996%	0.0609	**ACT**
PJM	11/15/2021	(207,221.69)	10/1/2021	10/31/2021	15.50	15.00	30.50	-0.0738%	(0.0225)	**ACT**
PJM	11/15/2021	(560,237.40)	10/1/2021	10/31/2021	15.50	15.00	30.50	-0.1996%	(0.0609)	**ACT**
PJM	11/15/2021	(25,281.79)	10/1/2021	10/31/2021	15.50	15.00	30.50	-0.0090%	(0.0027)	**ACT**
PJM	11/15/2021	(179.08)	10/1/2021	10/31/2021	15.50	15.00	30.50	-0.0001%	(0.0000)	**ACT**
PJM	11/15/2021	(903.17)	10/1/2021	10/31/2021	15.50	15.00	30.50	-0.0003%	(0.0001)	**ACT**
PJM	11/15/2021	795,067.61	10/1/2021	10/31/2021	15.50	15.00	30.50	0.2833%	0.0864	**ACT**
PJM	11/15/2021	(43,596.78)	10/1/2021	10/31/2021	15.50	15.00	30.50	-0.0155%	(0.0047)	**ACT**
PJM	11/15/2021	(0.53)	10/1/2021	10/31/2021	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	11/15/2021	(177,400.41)	10/1/2021	10/31/2021	15.50	15.00	30.50	-0.0632%	(0.0193)	**ACT**
PJM	11/15/2021	(500.82)	10/1/2021	10/31/2021	15.50	15.00	30.50	-0.0002%	(0.0001)	**ACT**
PJM	11/15/2021	(217.09)	10/1/2021	10/31/2021	15.50	15.00	30.50	-0.0001%	(0.0000)	**ACT**
PJM	11/15/2021	1,109,577.80	10/1/2021	10/31/2021	15.50	15.00	30.50	0.3953%	0.1206	**ACT**
PJM	11/15/2021	11,813,951.77	10/1/2021	10/31/2021	15.50	15.00	30.50	4.2093%	1.2838	**ACT**
PJM	11/15/2021	495,954.44	10/1/2021	10/31/2021	15.50	15.00	30.50	0.1767%	0.0539	**ACT**
AEG	12/8/2021	1,358,631.05	11/1/2021	11/30/2021	15.00	8.00	23.00	0.4841%	0.1113	**N/A**
AEG	12/8/2021	3,789,987.05	11/1/2021	11/30/2021	15.00	8.00	23.00	1.3504%	0.3106	**N/A**
PJM	12/15/2021	(118.66)	11/1/2021	11/30/2021	15.00	15.00	30.00	0.0000%	(0.0000)	**ACT**
PJM	12/15/2021	(1,893.90)	11/1/2021	11/30/2021	15.00	15.00	30.00	-0.0007%	(0.0002)	**ACT**
AEG	12/8/2021	33,067.00	11/1/2021	11/30/2021	15.00	8.00	23.00	0.0118%	0.0027	**N/A**
AEG	12/8/2021	44,334.00	11/1/2021	11/30/2021	15.00	8.00	23.00	0.0158%	0.0036	**N/A**
AEG	12/8/2021	11,605.00	11/1/2021	11/30/2021	15.00	8.00	23.00	0.0041%	0.0010	**N/A**
PJM	12/15/2021	178,604.02	11/1/2021	11/30/2021	15.00	15.00	30.00	0.0636%	0.0191	**ACT**
PJM	12/15/2021	(119,572.89)	11/1/2021	11/30/2021	15.00	15.00	30.00	-0.0426%	(0.0128)	**ACT**
PJM	12/15/2021	71,915.04	11/1/2021	11/30/2021	15.00	15.00	30.00	0.0256%	0.0077	**ACT**
PJM	12/15/2021	106,313.69	11/1/2021	11/30/2021	15.00	15.00	30.00	0.0379%	0.0114	**ACT**
PJM	12/15/2021	30.62	11/1/2021	11/30/2021	15.00	15.00	30.00	0.0000%	0.0000	**ACT**
PJM	12/15/2021	(13,409.78)	11/1/2021	11/30/2021	15.00	15.00	30.00	-0.0048%	(0.0014)	**ACT**
PJM	12/15/2021	(24.41)	11/1/2021	11/30/2021	15.00	15.00	30.00	0.0000%	(0.0000)	**ACT**
PJM	12/15/2021	283,124.03	11/1/2021	11/30/2021	15.00	15.00	30.00	0.1009%	0.0303	**ACT**
PJM	12/15/2021	1,018,018.41	11/1/2021	11/30/2021	15.00	15.00	30.00	0.3627%	0.1088	**ACT**
PJM	12/15/2021	72,729.53	11/1/2021	11/30/2021	15.00	15.00	30.00	0.0259%	0.0078	**ACT**
PJM	12/15/2021	10,882.71	11/1/2021	11/30/2021	15.00	15.00	30.00	0.0039%	0.0012	**ACT**
PJM	12/15/2021	(114.01)	11/1/2021	11/30/2021	15.00	15.00	30.00	0.0000%	(0.0000)	**ACT**
PJM	12/15/2021	(3,370.37)	11/1/2021	11/30/2021	15.00	15.00	30.00	-0.0012%	(0.0004)	**ACT**
PJM	12/15/2021	3,183.14	11/1/2021	11/30/2021	15.00	15.00	30.00	0.0011%	0.0003	**ACT**
PJM	12/15/2021	658.76	11/1/2021	11/30/2021	15.00	15.00	30.00	0.0002%	0.0001	**ACT**
PJM	12/15/2021	405.25	11/1/2021	11/30/2021	15.00	15.00	30.00	0.0001%	0.0000	**ACT**
PJM	12/15/2021	2,423.92	11/1/2021	11/30/2021	15.00	15.00	30.00	0.0009%	0.0003	**ACT**
PJM	12/15/2021	49,071.85	11/1/2021	11/30/2021	15.00	15.00	30.00	0.0175%	0.0052	**ACT**
PJM	12/15/2021	1,254.45	11/1/2021	11/30/2021	15.00	15.00	30.00	0.0004%	0.0001	**ACT**
PJM	12/15/2021	(1.14)	11/1/2021	11/30/2021	15.00	15.00	30.00	0.0000%	(0.0000)	**ACT**
PJM	12/15/2021	148.16	11/1/2021	11/30/2021	15.00	15.00	30.00	0.0001%	0.0000	**ACT**
PJM	12/15/2021	701,264.09	11/1/2021	11/30/2021	15.00	15.00	30.00	0.2499%	0.0750	**ACT**
PJM	12/15/2021	9,071.07	11/1/2021	11/30/2021	15.00	15.00	30.00	0.0032%	0.0010	**ACT**
PJM	12/15/2021	(0.88)	11/1/2021	11/30/2021	15.00	15.00	30.00	0.0000%	(0.0000)	**ACT**
PJM	12/15/2021	90,557.64	11/1/2021	11/30/2021	15.00	15.00	30.00	0.0323%	0.0097	**ACT**
PJM	12/15/2021	(1,625.55)	11/1/2021	11/30/2021	15.00	15.00	30.00	-0.0006%	(0.0002)	**ACT**
PJM	12/15/2021	(43,684.19)	11/1/2021	11/30/2021	15.00	15.00	30.00	-0.0156%	(0.0047)	**ACT**
PJM	12/15/2021	578,912.91	11/1/2021	11/30/2021	15.00	15.00	30.00	0.2063%	0.0619	**ACT**
PJM	12/15/2021	(571,532.34)	11/1/2021	11/30/2021	15.00	15.00	30.00	-0.2036%	(0.0611)	**ACT**
PJM	12/15/2021	(578,911.98)	11/1/2021	11/30/2021	15.00	15.00	30.00	-0.2063%	(0.0619)	**ACT**
PJM	12/15/2021	(12.43)	11/1/2021	11/30/2021	15.00	15.00	30.00	0.0000%	(0.0000)	**ACT**
PJM	12/15/2021	(3,095.72)	11/1/2021	11/30/2021	15.00	15.00	30.00	-0.0011%	(0.0003)	**ACT**
PJM	12/15/2021	675,843.68	11/1/2021	11/30/2021	15.00	15.00	30.00	0.2408%	0.0722	**ACT**
PJM	12/15/2021	(40,603.81)	11/1/2021	11/30/2021	15.00	15.00	30.00	-0.0145%	(0.0043)	**ACT**
PJM	12/15/2021	(0.81)	11/1/2021	11/30/2021	15.00	15.00	30.00	0.0000%	(0.0000)	**ACT**
PJM	12/15/2021	(210,851.50)	11/1/2021	11/30/2021	15.00	15.00	30.00	-0.0751%	(0.0225)	**ACT**
PJM	12/15/2021	(38.36)	11/1/2021	11/30/2021	15.00	15.00	30.00	0.0000%	(0.0000)	**ACT**
PJM	1/15/2022	2,791,744.66	12/1/2021	12/31/2021	15.50	15.00	30.50	0.9947%	0.3034	**ACT**
PJM	1/15/2022	19,886,142.21	12/1/2021	12/31/2021	15.50	15.00	30.50	7.0854%	2.1611	**ACT**
PJM	1/15/2022	(495,954.44)	12/1/2021	12/31/2021	15.50	15.00	30.50	-0.1767%	(0.0539)	**ACT**
PJM	1/15/2022	(495,954.44)	12/1/2021	12/31/2021	15.50	15.00	30.50	-0.1767%	(0.0539)	**ACT**
AEG	1/10/2022	1,252,747.17	12/1/2021	12/31/2021	15.50	10.00	25.50	0.4464%	0.1138	**N/A**
AEG	1/10/2022	4,090,074.18	12/1/2021	12/31/2021	15.50	10.00	25.50	1.4573%	0.3716	**N/A**
PJM	1/15/2022	(118.18)	12/1/2021	12/31/2021	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	1/15/2022	(1,134.82)	12/1/2021	12/31/2021	15.50	15.00	30.50	-0.0004%	(0.0001)	**ACT**
AEG	1/10/2022	30,242.00	12/1/2021	12/31/2021	15.50	10.00	25.50	0.0108%	0.0027	**N/A**
AEG	1/10/2022	210,614.00	12/1/2021	12/31/2021	15.50	10.00	25.50	0.0750%	0.0191	**N/A**
AEG	1/10/2022	55,450.00	12/1/2021	12/31/2021	15.50	10.00	25.50	0.0198%	0.0050	**N/A**
AEG	1/10/2022	2,211,361.00	12/1/2021	12/31/2021	15.50	10.00	25.50	0.7879%	0.2009	**N/A**
PJM	1/15/2022	180,408.02	12/1/2021	12/31/2021	15.50	15.00	30.50	0.0643%	0.0196	**ACT**
PJM	1/15/2022	631.98	12/1/2021	12/31/2021	15.50	15.00	30.50	0.0002%	0.0001	**ACT**
PJM	1/15/2022	(119,573.10)	12/1/2021	12/31/2021	15.50	15.00	30.50	-0.0426%	(0.0130)	**ACT**
PJM	1/15/2022	71,367.89	12/1/2021	12/31/2021	15.50	15.00	30.50	0.0254%	0.0078	**ACT**

Supplier Name	Payment Date	Invoice Amount	Service Start Date	Service End Date	Service Lead Time	Payment Lead Time	Total Lead Time	Weighting Factor	Weighted Lead Time	
PJM	1/15/2022	106,369.94	12/1/2021	12/31/2021	15.50	15.00	30.50	0.0379%	0.0116	**ACT**
PJM	1/15/2022	181.40	12/1/2021	12/31/2021	15.50	15.00	30.50	0.0001%	0.0000	**ACT**
PJM	1/15/2022	(8,973.96)	12/1/2021	12/31/2021	15.50	15.00	30.50	-0.0032%	(0.0010)	**ACT**
PJM	1/15/2022	(28.91)	12/1/2021	12/31/2021	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	1/15/2022	671,564.34	12/1/2021	12/31/2021	15.50	15.00	30.50	0.2393%	0.0730	**ACT**
PJM	1/15/2022	82,151.22	12/1/2021	12/31/2021	15.50	15.00	30.50	0.0293%	0.0089	**ACT**
PJM	1/15/2022	24,173.53	12/1/2021	12/31/2021	15.50	15.00	30.50	0.0086%	0.0026	**ACT**
PJM	1/15/2022	(4.35)	12/1/2021	12/31/2021	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	1/15/2022	(886.03)	12/1/2021	12/31/2021	15.50	15.00	30.50	-0.0003%	(0.0001)	**ACT**
PJM	1/15/2022	2,192.75	12/1/2021	12/31/2021	15.50	15.00	30.50	0.0008%	0.0002	**ACT**
PJM	1/15/2022	7.60	12/1/2021	12/31/2021	15.50	15.00	30.50	0.0000%	0.0000	**ACT**
PJM	1/15/2022	457.57	12/1/2021	12/31/2021	15.50	15.00	30.50	0.0002%	0.0000	**ACT**
PJM	1/15/2022	142.96	12/1/2021	12/31/2021	15.50	15.00	30.50	0.0001%	0.0000	**ACT**
PJM	1/15/2022	5,315.56	12/1/2021	12/31/2021	15.50	15.00	30.50	0.0019%	0.0006	**ACT**
PJM	1/15/2022	70,075.01	12/1/2021	12/31/2021	15.50	15.00	30.50	0.0250%	0.0076	**ACT**
PJM	1/15/2022	157.46	12/1/2021	12/31/2021	15.50	15.00	30.50	0.0001%	0.0000	**ACT**
PJM	1/15/2022	(0.10)	12/1/2021	12/31/2021	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	1/15/2022	(0.34)	12/1/2021	12/31/2021	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	1/15/2022	812.52	12/1/2021	12/31/2021	15.50	15.00	30.50	0.0003%	0.0001	**ACT**
PJM	1/15/2022	1,704,832.16	12/1/2021	12/31/2021	15.50	15.00	30.50	0.6074%	0.1853	**ACT**
PJM	1/15/2022	153,817.60	12/1/2021	12/31/2021	15.50	15.00	30.50	0.0548%	0.0167	**ACT**
PJM	1/15/2022	(1.50)	12/1/2021	12/31/2021	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	1/15/2022	234,768.29	12/1/2021	12/31/2021	15.50	15.00	30.50	0.0836%	0.0255	**ACT**
PJM	1/15/2022	(1,010.67)	12/1/2021	12/31/2021	15.50	15.00	30.50	-0.0004%	(0.0001)	**ACT**
PJM	1/15/2022	560,238.30	12/1/2021	12/31/2021	15.50	15.00	30.50	0.1996%	0.0609	**ACT**
PJM	1/15/2022	(1,970,966.26)	12/1/2021	12/31/2021	15.50	15.00	30.50	-0.7023%	(0.2142)	**ACT**
PJM	1/15/2022	(560,237.40)	12/1/2021	12/31/2021	15.50	15.00	30.50	-0.1996%	(0.0609)	**ACT**
PJM	1/15/2022	(89,038.79)	12/1/2021	12/31/2021	15.50	15.00	30.50	-0.0317%	(0.0097)	**ACT**
PJM	1/15/2022	(116.06)	12/1/2021	12/31/2021	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	1/15/2022	(15.49)	12/1/2021	12/31/2021	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	1/15/2022	1,124,681.11	12/1/2021	12/31/2021	15.50	15.00	30.50	0.4007%	0.1222	**ACT**
PJM	1/15/2022	(45,800.68)	12/1/2021	12/31/2021	15.50	15.00	30.50	-0.0163%	(0.0050)	**ACT**
PJM	1/15/2022	(142.14)	12/1/2021	12/31/2021	15.50	15.00	30.50	-0.0001%	(0.0000)	**ACT**
PJM	1/15/2022	(0.34)	12/1/2021	12/31/2021	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	1/15/2022	(263,342.26)	12/1/2021	12/31/2021	15.50	15.00	30.50	-0.0938%	(0.0286)	**ACT**
PJM	1/15/2022	(328.83)	12/1/2021	12/31/2021	15.50	15.00	30.50	-0.0001%	(0.0000)	**ACT**
PJM	1/15/2022	5,830,639.90	12/1/2021	12/31/2021	15.50	15.00	30.50	2.0775%	0.6336	**ACT**
PJM	1/15/2022	2,468,987.65	12/1/2021	12/31/2021	15.50	15.00	30.50	0.8797%	0.2683	**ACT**
PJM	1/15/2022	(49.67)	12/1/2021	12/31/2021	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
AEG	2/8/2022	1,469,960.91	1/1/2022	1/31/2022	15.50	8.00	23.50	0.5237%	0.1231	**N/A**
AEG	2/8/2022	4,385,067.89	1/1/2022	1/31/2022	15.50	8.00	23.50	1.5624%	0.3672	**N/A**
PJM	1/15/2022	(64.91)	12/1/2021	12/31/2021	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	1/15/2022	(2,128.68)	12/1/2021	12/31/2021	15.50	15.00	30.50	-0.0008%	(0.0002)	**ACT**
AEG	2/8/2022	60,061.00	1/1/2022	1/31/2022	15.50	8.00	23.50	0.0214%	0.0050	**N/A**
AEG	2/8/2022	294,370.00	1/1/2022	1/31/2022	15.50	8.00	23.50	0.1049%	0.0246	**N/A**
AEG	2/8/2022	387,264.00	1/1/2022	1/31/2022	15.50	8.00	23.50	0.1380%	0.0324	**N/A**
AEG	2/8/2022	2,554,068.00	1/1/2022	1/31/2022	15.50	8.00	23.50	0.9100%	0.2139	**N/A**
PJM	1/15/2022	176,046.21	12/1/2021	12/31/2021	15.50	15.00	30.50	0.0627%	0.0191	**ACT**
PJM	2/15/2022	(119,572.89)	1/1/2022	1/31/2022	15.50	15.00	30.50	-0.0426%	(0.0130)	**ACT**
PJM	2/15/2022	69,637.16	1/1/2022	1/31/2022	15.50	15.00	30.50	0.0248%	0.0076	**ACT**
PJM	2/15/2022	70,077.31	1/1/2022	1/31/2022	15.50	15.00	30.50	0.0250%	0.0076	**ACT**
PJM	2/15/2022	38.86	1/1/2022	1/31/2022	15.50	15.00	30.50	0.0000%	0.0000	**ACT**
PJM	2/15/2022	(0.31)	1/1/2022	1/31/2022	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	2/15/2022	(38,992.68)	1/1/2022	1/31/2022	15.50	15.00	30.50	-0.0139%	(0.0042)	**ACT**
PJM	2/15/2022	(12.31)	1/1/2022	1/31/2022	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	2/15/2022	186,024.56	1/1/2022	1/31/2022	15.50	15.00	30.50	0.0663%	0.0202	**ACT**
PJM	2/15/2022	578,033.09	1/1/2022	1/31/2022	15.50	15.00	30.50	0.2060%	0.0628	**ACT**
PJM	2/15/2022	24,387.30	1/1/2022	1/31/2022	15.50	15.00	30.50	0.0087%	0.0027	**ACT**
PJM	2/15/2022	14,716.82	1/1/2022	1/31/2022	15.50	15.00	30.50	0.0052%	0.0016	**ACT**
PJM	2/15/2022	(383.96)	1/1/2022	1/31/2022	15.50	15.00	30.50	-0.0001%	(0.0000)	**ACT**
PJM	2/15/2022	(1,325.25)	1/1/2022	1/31/2022	15.50	15.00	30.50	-0.0005%	(0.0001)	**ACT**
PJM	2/15/2022	284.68	1/1/2022	1/31/2022	15.50	15.00	30.50	0.0001%	0.0000	**ACT**
PJM	2/15/2022	68.72	1/1/2022	1/31/2022	15.50	15.00	30.50	0.0000%	0.0000	**ACT**
PJM	2/15/2022	883.63	1/1/2022	1/31/2022	15.50	15.00	30.50	0.0003%	0.0001	**ACT**
PJM	2/15/2022	54.95	1/1/2022	1/31/2022	15.50	15.00	30.50	0.0000%	0.0000	**ACT**
PJM	2/15/2022	10,814.34	1/1/2022	1/31/2022	15.50	15.00	30.50	0.0039%	0.0012	**ACT**
PJM	2/15/2022	34,092.61	1/1/2022	1/31/2022	15.50	15.00	30.50	0.0121%	0.0037	**ACT**
PJM	2/15/2022	(86.46)	1/1/2022	1/31/2022	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	2/15/2022	(0.17)	1/1/2022	1/31/2022	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	2/15/2022	315,078.82	1/1/2022	1/31/2022	15.50	15.00	30.50	0.1123%	0.0342	**ACT**
PJM	2/15/2022	19,879.67	1/1/2022	1/31/2022	15.50	15.00	30.50	0.0071%	0.0022	**ACT**
PJM	2/15/2022	(1.75)	1/1/2022	1/31/2022	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	2/15/2022	72,443.35	1/1/2022	1/31/2022	15.50	15.00	30.50	0.0258%	0.0079	**ACT**
PJM	2/15/2022	578,912.22	1/1/2022	1/31/2022	15.50	15.00	30.50	0.2063%	0.0629	**ACT**
PJM	2/15/2022	(508,507.00)	1/1/2022	1/31/2022	15.50	15.00	30.50	-0.1812%	(0.0553)	**ACT**
PJM	2/15/2022	(578,911.98)	1/1/2022	1/31/2022	15.50	15.00	30.50	-0.2063%	(0.0629)	**ACT**
PJM	2/15/2022	(40,247.85)	1/1/2022	1/31/2022	15.50	15.00	30.50	-0.0143%	(0.0044)	**ACT**
PJM	2/15/2022	(254.68)	1/1/2022	1/31/2022	15.50	15.00	30.50	-0.0001%	(0.0000)	**ACT**
PJM	2/15/2022	(5,416.98)	1/1/2022	1/31/2022	15.50	15.00	30.50	-0.0019%	(0.0006)	**ACT**
PJM	2/15/2022	(0.21)	1/1/2022	1/31/2022	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	2/15/2022	(0.05)	1/1/2022	1/31/2022	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	2/15/2022	774,795.80	1/1/2022	1/31/2022	15.50	15.00	30.50	0.2761%	0.0842	**ACT**
PJM	2/15/2022	(3,573.93)	1/1/2022	1/31/2022	15.50	15.00	30.50	-0.0013%	(0.0004)	**ACT**
PJM	2/15/2022	(0.92)	1/1/2022	1/31/2022	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	2/15/2022	(183,515.87)	1/1/2022	1/31/2022	15.50	15.00	30.50	-0.0654%	(0.0199)	**ACT**
PJM	2/15/2022	0.62	1/1/2022	1/31/2022	15.50	15.00	30.50	0.0000%	0.0000	**ACT**
PJM	2/15/2022	(44.28)	1/1/2022	1/31/2022	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	3/15/2022	4,015,700.66	2/1/2022	2/28/2022	14.00	15.00	29.00	1.4308%	0.4149	**ACT**
PJM	3/15/2022	1,284,331.57	2/1/2022	2/28/2022	14.00	15.00	29.00	0.4576%	0.1327	**ACT**
AEG	3/8/2022	1,456,188.63	2/1/2022	2/28/2022	14.00	8.00	22.00	0.5188%	0.1141	**N/A**
AEG	3/8/2022	4,337,089.64	2/1/2022	2/28/2022	14.00	8.00	22.00	1.5453%	0.3400	**N/A**
PJM	3/15/2022	426.84	2/1/2022	2/28/2022	14.00	15.00	29.00	0.0002%	0.0000	**ACT**
PJM	3/15/2022	(969.54)	2/1/2022	2/28/2022	14.00	15.00	29.00	-0.0003%	(0.0001)	**ACT**
AEG	3/8/2022	222,081.00	2/1/2022	2/28/2022	14.00	8.00	22.00	0.0791%	0.0174	**N/A**
AEG	3/8/2022	136,288.00	2/1/2022	2/28/2022	14.00	8.00	22.00	0.0486%	0.0107	**N/A**
AEG	3/8/2022	1,633,724.00	2/1/2022	2/28/2022	14.00	8.00	22.00	0.5821%	0.1281	**N/A**
AEG	3/8/2022	756,465.00	2/1/2022	2/28/2022	14.00	8.00	22.00	0.2695%	0.0593	**N/A**
PJM	3/15/2022	176,394.34	2/1/2022	2/28/2022	14.00	15.00	29.00	0.0628%	0.0182	**ACT**
PJM	3/15/2022	(119,572.89)	2/1/2022	2/28/2022	14.00	15.00	29.00	-0.0426%	(0.0124)	**ACT**
PJM	3/15/2022	69,780.38	2/1/2022	2/28/2022	14.00	15.00	29.00	0.0249%	0.0072	**ACT**
PJM	3/15/2022	4,708.20	2/1/2022	2/28/2022	14.00	15.00	29.00	0.0017%	0.0005	**ACT**
PJM	3/15/2022	(3,865.67)	2/1/2022	2/28/2022	14.00	15.00	29.00	-0.0014%	(0.0004)	**ACT**
PJM	3/15/2022	4,760,112.29	2/1/2022	2/28/2022	14.00	15.00	29.00	1.6960%	0.4918	**ACT**
PJM	3/15/2022	274,499.65	2/1/2022	2/28/2022	14.00	15.00	29.00	0.0978%	0.0284	**ACT**
PJM	3/15/2022	26,428.60	2/1/2022	2/28/2022	14.00	15.00	29.00	0.0094%	0.0027	**ACT**
PJM	3/15/2022	69,801.04	2/1/2022	2/28/2022	14.00	15.00	29.00	0.0249%	0.0072	**ACT**
PJM	3/15/2022	(5,568.07)	2/1/2022	2/28/2022	14.00	15.00	29.00	-0.0020%	(0.0006)	**ACT**
PJM	3/15/2022	618.29	2/1/2022	2/28/2022	14.00	15.00	29.00	0.0002%	0.0001	**ACT**
PJM	3/15/2022	243.31	2/1/2022	2/28/2022	14.00	15.00	29.00	0.0001%	0.0000	**ACT**
PJM	3/15/2022	(130.66)	2/1/2022	2/28/2022	14.00	15.00	29.00	0.0000%	(0.0000)	**ACT**
PJM	3/15/2022	4,420.73	2/1/2022	2/28/2022	14.00	15.00	29.00	0.0016%	0.0005	**ACT**
PJM	3/15/2022	62,901.50	2/1/2022	2/28/2022	14.00	15.00	29.00	0.0224%	0.0065	**ACT**
PJM	3/15/2022	109.49	2/1/2022	2/28/2022	14.00	15.00	29.00	0.0000%	0.0000	**ACT**
PJM	3/15/2022	(0.22)	2/1/2022	2/28/2022	14.00	15.00	29.00	0.0000%	(0.0000)	**ACT**
PJM	3/15/2022	2,685,059.73	2/1/2022	2/28/2022	14.00	15.00	29.00	0.9567%	0.2774	**ACT**
PJM	3/15/2022	(2,386,353.27)	2/1/2022	2/28/2022	14.00	15.00	29.00	-0.8503%	(0.2466)	**ACT**
PJM	3/15/2022	3.51	2/1/2022	2/28/2022	14.00	15.00	29.00	0.0000%	0.0000	**ACT**
PJM	3/15/2022	940,331.49	2/1/2022	2/28/2022	14.00	15.00	29.00	0.3350%	0.0972	**ACT**
PJM	3/15/2022	141.43	2/1/2022	2/28/2022	14.00	15.00	29.00	0.0001%	0.0000	**ACT**
PJM	3/15/2022	(319,595.27)	2/1/2022	2/28/2022	14.00	15.00	29.00	-0.1139%	(0.0330)	**ACT**

Supplier Name	Payment Date	Invoice Amount	Service Start Date	Service End Date	Service Lead Time	Payment Lead Time	Total Lead Time	Weighting Factor	Weighted Lead Time	
PJM	3/15/2022	578,912.91	2/1/2022	2/28/2022	14.00	15.00	29.00	0.2063%	0.0598	**ACT**
PJM	3/15/2022	(2,340,649.28)	2/1/2022	2/28/2022	14.00	15.00	29.00	-0.8340%	(0.2419)	**ACT**
PJM	3/15/2022	(578,911.98)	2/1/2022	2/28/2022	14.00	15.00	29.00	-0.2063%	(0.0598)	**ACT**
PJM	3/15/2022	(79.89)	2/1/2022	2/28/2022	14.00	15.00	29.00	0.0000%	(0.0000)	**ACT**
PJM	3/15/2022	(6,505.94)	2/1/2022	2/28/2022	14.00	15.00	29.00	-0.0023%	(0.0007)	**ACT**
PJM	3/15/2022	1,845,826.64	2/1/2022	2/28/2022	14.00	15.00	29.00	0.6577%	0.1907	**ACT**
PJM	3/15/2022	(452,266.65)	2/1/2022	2/28/2022	14.00	15.00	29.00	-0.1611%	(0.0467)	**ACT**
PJM	3/15/2022	(0.43)	2/1/2022	2/28/2022	14.00	15.00	29.00	0.0000%	(0.0000)	**ACT**
PJM	3/15/2022	(536,845.57)	2/1/2022	2/28/2022	14.00	15.00	29.00	-0.1913%	(0.0555)	**ACT**
PJM	3/15/2022	(573.20)	2/1/2022	2/28/2022	14.00	15.00	29.00	-0.0002%	(0.0001)	**ACT**
PJM	3/15/2022	2,289,260.73	2/1/2022	2/28/2022	14.00	15.00	29.00	0.8157%	0.2365	**ACT**
PJM	3/15/2022	11,487,772.88	2/1/2022	2/28/2022	14.00	15.00	29.00	4.0931%	1.1870	**ACT**
AEG	4/7/2022	2,046,448.16	3/1/2022	3/31/2022	15.50	7.00	22.50	0.7291%	0.1641	**N/A**
AEG	4/7/2022	4,585,084.16	3/1/2022	3/31/2022	15.50	7.00	22.50	1.6337%	0.3676	**N/A**
PJM	3/15/2022	(164.34)	2/1/2022	2/28/2022	14.00	15.00	29.00	-0.0001%	(0.0000)	**ACT**
PJM	3/15/2022	(326.15)	2/1/2022	2/28/2022	14.00	15.00	29.00	-0.0001%	(0.0000)	**ACT**
AEG	4/7/2022	106,025.00	3/1/2022	3/31/2022	15.50	7.00	22.50	0.0378%	0.0085	**N/A**
AEG	4/7/2022	89,413.00	3/1/2022	3/31/2022	15.50	7.00	22.50	0.0319%	0.0072	**N/A**
AEG	4/7/2022	110,323.00	3/1/2022	3/31/2022	15.50	7.00	22.50	0.0393%	0.0088	**N/A**
AEG	4/7/2022	(179,892.00)	3/1/2022	3/31/2022	15.50	7.00	22.50	-0.0641%	(0.0144)	**N/A**
PJM	3/15/2022	177,003.96	2/1/2022	2/28/2022	14.00	15.00	29.00	0.0631%	0.0183	**ACT**
PJM	3/15/2022	(2.55)	2/1/2022	2/28/2022	14.00	15.00	29.00	0.0000%	(0.0000)	**ACT**
PJM	3/15/2022	(119,572.88)	2/1/2022	2/28/2022	14.00	15.00	29.00	-0.0426%	(0.0124)	**ACT**
PJM	3/15/2022	70,022.40	2/1/2022	2/28/2022	14.00	15.00	29.00	0.0249%	0.0072	**ACT**
PJM	3/15/2022	65,521.91	2/1/2022	2/28/2022	14.00	15.00	29.00	0.0233%	0.0068	**ACT**
PJM	3/15/2022	(20,883.13)	2/1/2022	2/28/2022	14.00	15.00	29.00	-0.0074%	(0.0022)	**ACT**
PJM	3/15/2022	1,040,739.14	2/1/2022	2/28/2022	14.00	15.00	29.00	0.3708%	0.1075	**ACT**
PJM	4/15/2022	21,662.24	3/1/2022	3/31/2022	15.50	15.00	30.50	0.0077%	0.0024	**ACT**
PJM	4/15/2022	2,706.94	3/1/2022	3/31/2022	15.50	15.00	30.50	0.0010%	0.0003	**ACT**
PJM	4/15/2022	(86.44)	3/1/2022	3/31/2022	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	4/15/2022	(504.40)	3/1/2022	3/31/2022	15.50	15.00	30.50	-0.0002%	(0.0001)	**ACT**
PJM	4/15/2022	155.69	3/1/2022	3/31/2022	15.50	15.00	30.50	0.0001%	0.0000	**ACT**
PJM	4/15/2022	252.22	3/1/2022	3/31/2022	15.50	15.00	30.50	0.0001%	0.0000	**ACT**
PJM	4/15/2022	(22.27)	3/1/2022	3/31/2022	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	4/15/2022	2,903.83	3/1/2022	3/31/2022	15.50	15.00	30.50	0.0010%	0.0003	**ACT**
PJM	4/15/2022	19,869.10	3/1/2022	3/31/2022	15.50	15.00	30.50	0.0071%	0.0022	**ACT**
PJM	4/15/2022	204.37	3/1/2022	3/31/2022	15.50	15.00	30.50	0.0001%	0.0000	**ACT**
PJM	4/15/2022	(0.10)	3/1/2022	3/31/2022	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	4/15/2022	549,479.11	3/1/2022	3/31/2022	15.50	15.00	30.50	0.1958%	0.0597	**ACT**
PJM	4/15/2022	(64,787.44)	3/1/2022	3/31/2022	15.50	15.00	30.50	-0.0231%	(0.0070)	**ACT**
PJM	4/15/2022	1.12	3/1/2022	3/31/2022	15.50	15.00	30.50	0.0000%	0.0000	**ACT**
PJM	4/15/2022	366,413.13	3/1/2022	3/31/2022	15.50	15.00	30.50	0.1306%	0.0398	**ACT**
PJM	4/15/2022	(121.02)	3/1/2022	3/31/2022	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	4/15/2022	(53,051.72)	3/1/2022	3/31/2022	15.50	15.00	30.50	-0.0189%	(0.0058)	**ACT**
PJM	4/15/2022	522,889.08	3/1/2022	3/31/2022	15.50	15.00	30.50	0.1863%	0.0568	**ACT**
PJM	4/15/2022	(767,574.47)	3/1/2022	3/31/2022	15.50	15.00	30.50	-0.2735%	(0.0834)	**ACT**
PJM	4/15/2022	102.90	3/1/2022	3/31/2022	15.50	15.00	30.50	0.0000%	0.0000	**ACT**
PJM	4/15/2022	(522,888.24)	3/1/2022	3/31/2022	15.50	15.00	30.50	-0.1863%	(0.0568)	**ACT**
PJM	4/15/2022	(0.67)	3/1/2022	3/31/2022	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	4/15/2022	(10,836.87)	3/1/2022	3/31/2022	15.50	15.00	30.50	-0.0039%	(0.0012)	**ACT**
PJM	4/15/2022	(1,086.08)	3/1/2022	3/31/2022	15.50	15.00	30.50	-0.0004%	(0.0001)	**ACT**
PJM	4/15/2022	264,880.63	3/1/2022	3/31/2022	15.50	15.00	30.50	0.0944%	0.0288	**ACT**
PJM	4/15/2022	(24,283.92)	3/1/2022	3/31/2022	15.50	15.00	30.50	-0.0087%	(0.0026)	**ACT**
PJM	4/15/2022	0.80	3/1/2022	3/31/2022	15.50	15.00	30.50	0.0000%	0.0000	**ACT**
PJM	4/15/2022	(295,870.93)	3/1/2022	3/31/2022	15.50	15.00	30.50	-0.1054%	(0.0322)	**ACT**
PJM	4/15/2022	(156.87)	3/1/2022	3/31/2022	15.50	15.00	30.50	-0.0001%	(0.0000)	**ACT**
PJM	4/15/2022	1,341,965.27	3/1/2022	3/31/2022	15.50	15.00	30.50	0.4781%	0.1458	**ACT**
PJM	4/15/2022	18,467,206.69	3/1/2022	3/31/2022	15.50	15.00	30.50	6.5798%	2.0069	**ACT**
AEG	5/9/2022	1,433,416.64	4/1/2022	4/30/2022	15.00	9.00	24.00	0.5107%	0.1226	**N/A**
AEG	5/9/2022	4,231,337.64	4/1/2022	4/30/2022	15.00	9.00	24.00	1.5076%	0.3618	**N/A**
PJM	4/15/2022	(86.00)	3/1/2022	3/31/2022	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	4/15/2022	(2,117.45)	3/1/2022	3/31/2022	15.50	15.00	30.50	-0.0008%	(0.0002)	**ACT**
AEG	5/9/2022	58,421.00	4/1/2022	4/30/2022	15.00	9.00	24.00	0.0208%	0.0050	**N/A**
AEG	5/9/2022	268,473.00	4/1/2022	4/30/2022	15.00	9.00	24.00	0.0957%	0.0230	**N/A**
AEG	5/9/2022	244,624.00	4/1/2022	4/30/2022	15.00	9.00	24.00	0.0872%	0.0209	**N/A**
AEG	5/9/2022	2,271,385.00	4/1/2022	4/30/2022	15.00	9.00	24.00	0.8093%	0.1942	**N/A**
PJM	4/15/2022	178,920.28	3/1/2022	3/31/2022	15.50	15.00	30.50	0.0637%	0.0194	**ACT**
PJM	4/15/2022	(119,572.89)	3/1/2022	3/31/2022	15.50	15.00	30.50	-0.0426%	(0.0130)	**ACT**
PJM	4/15/2022	70,782.82	3/1/2022	3/31/2022	15.50	15.00	30.50	0.0252%	0.0077	**ACT**
PJM	4/15/2022	75,441.11	3/1/2022	3/31/2022	15.50	15.00	30.50	0.0269%	0.0082	**ACT**
PJM	4/15/2022	11.91	3/1/2022	3/31/2022	15.50	15.00	30.50	0.0000%	0.0000	**ACT**
PJM	4/15/2022	(8,102.13)	3/1/2022	3/31/2022	15.50	15.00	30.50	-0.0029%	(0.0009)	**ACT**
PJM	4/15/2022	(72.21)	3/1/2022	3/31/2022	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	4/15/2022	513,146.59	3/1/2022	3/31/2022	15.50	15.00	30.50	0.1828%	0.0558	**ACT**
PJM	4/15/2022	49,882.19	3/1/2022	3/31/2022	15.50	15.00	30.50	0.0178%	0.0054	**ACT**
PJM	5/15/2022	3,662.40	4/1/2022	4/30/2022	15.00	15.00	30.00	0.0013%	0.0004	**ACT**
PJM	5/15/2022	(1,903.21)	4/1/2022	4/30/2022	15.00	15.00	30.00	-0.0007%	(0.0002)	**ACT**
PJM	5/15/2022	720.72	4/1/2022	4/30/2022	15.00	15.00	30.00	0.0003%	0.0001	**ACT**
PJM	5/15/2022	1,963.67	4/1/2022	4/30/2022	15.00	15.00	30.00	0.0007%	0.0002	**ACT**
PJM	5/15/2022	(220.83)	4/1/2022	4/30/2022	15.00	15.00	30.00	-0.0001%	(0.0000)	**ACT**
PJM	5/15/2022	2,797.55	4/1/2022	4/30/2022	15.00	15.00	30.00	0.0010%	0.0003	**ACT**
PJM	5/15/2022	24,371.98	4/1/2022	4/30/2022	15.00	15.00	30.00	0.0087%	0.0026	**ACT**
PJM	5/15/2022	(109.40)	4/1/2022	4/30/2022	15.00	15.00	30.00	0.0000%	(0.0000)	**ACT**
PJM	5/15/2022	(0.24)	4/1/2022	4/30/2022	15.00	15.00	30.00	0.0000%	(0.0000)	**ACT**
PJM	5/15/2022	759,249.97	4/1/2022	4/30/2022	15.00	15.00	30.00	0.2705%	0.0812	**ACT**
PJM	5/15/2022	45,654.87	4/1/2022	4/30/2022	15.00	15.00	30.00	0.0163%	0.0049	**ACT**
PJM	5/15/2022	295,121.80	4/1/2022	4/30/2022	15.00	15.00	30.00	0.1052%	0.0315	**ACT**
PJM	5/15/2022	578,912.91	4/1/2022	4/30/2022	15.00	15.00	30.00	0.2063%	0.0619	**ACT**
PJM	5/15/2022	(609,869.79)	4/1/2022	4/30/2022	15.00	15.00	30.00	-0.2173%	(0.0652)	**ACT**
PJM	5/15/2022	(578,911.98)	4/1/2022	4/30/2022	15.00	15.00	30.00	-0.2063%	(0.0619)	**ACT**
PJM	5/15/2022	(74,379.42)	4/1/2022	4/30/2022	15.00	15.00	30.00	-0.0265%	(0.0080)	**ACT**
PJM	5/15/2022	(5.64)	4/1/2022	4/30/2022	15.00	15.00	30.00	0.0000%	(0.0000)	**ACT**
PJM	5/15/2022	406,782.18	4/1/2022	4/30/2022	15.00	15.00	30.00	0.1449%	0.0435	**ACT**
PJM	5/15/2022	(12,689.33)	4/1/2022	4/30/2022	15.00	15.00	30.00	-0.0045%	(0.0014)	**ACT**
PJM	5/15/2022	(194,681.83)	4/1/2022	4/30/2022	15.00	15.00	30.00	-0.0694%	(0.0208)	**ACT**
PJM	5/15/2022	(357.83)	4/1/2022	4/30/2022	15.00	15.00	30.00	-0.0001%	(0.0000)	**ACT**
PJM	5/15/2022	2,420,480.62	4/1/2022	4/30/2022	15.00	15.00	30.00	0.8624%	0.2587	**ACT**
PJM	5/15/2022	7,876,732.77	4/1/2022	4/30/2022	15.00	15.00	30.00	2.8065%	0.8419	**ACT**
AEG	6/8/2022	1,367,603.71	5/1/2022	5/31/2022	15.50	8.00	23.50	0.4873%	0.1145	**N/A**
AEG	6/8/2022	4,762,786.71	5/1/2022	5/31/2022	15.50	8.00	23.50	1.6970%	0.3988	**N/A**
PJM	5/15/2022	(1,074.66)	4/1/2022	4/30/2022	15.00	15.00	30.00	-0.0004%	(0.0001)	**ACT**
PJM	5/15/2022	(6,994.86)	4/1/2022	4/30/2022	15.00	15.00	30.00	-0.0025%	(0.0007)	**ACT**
AEG	6/8/2022	80,638.00	5/1/2022	5/31/2022	15.50	8.00	23.50	0.0287%	0.0068	**N/A**
AEG	6/8/2022	280,502.00	5/1/2022	5/31/2022	15.50	8.00	23.50	0.0999%	0.0235	**N/A**
AEG	6/8/2022	(24,143.00)	5/1/2022	5/31/2022	15.50	8.00	23.50	-0.0086%	(0.0020)	**N/A**
AEG	6/8/2022	2,190,859.00	5/1/2022	5/31/2022	15.50	8.00	23.50	0.7806%	0.1834	**N/A**
PJM	5/15/2022	173,051.99	4/1/2022	4/30/2022	15.00	15.00	30.00	0.0617%	0.0185	**ACT**
PJM	5/15/2022	(115,587.33)	4/1/2022	4/30/2022	15.00	15.00	30.00	-0.0412%	(0.0124)	**ACT**
PJM	5/15/2022	72,662.40	4/1/2022	4/30/2022	15.00	15.00	30.00	0.0259%	0.0078	**ACT**
PJM	5/15/2022	39,907.90	4/1/2022	4/30/2022	15.00	15.00	30.00	0.0142%	0.0043	**ACT**
PJM	5/15/2022	1,101.86	4/1/2022	4/30/2022	15.00	15.00	30.00	0.0004%	0.0001	**ACT**
PJM	5/15/2022	(12,462.62)	4/1/2022	4/30/2022	15.00	15.00	30.00	-0.0044%	(0.0013)	**ACT**
PJM	5/15/2022	(872.65)	4/1/2022	4/30/2022	15.00	15.00	30.00	-0.0003%	(0.0001)	**ACT**
PJM	5/15/2022	1,855,331.19	4/1/2022	4/30/2022	15.00	15.00	30.00	0.6611%	0.1983	**ACT**
PJM	5/15/2022	654,690.07	4/1/2022	4/30/2022	15.00	15.00	30.00	0.2333%	0.0700	**ACT**
PJM	5/15/2022	35,637.68	4/1/2022	4/30/2022	15.00	15.00	30.00	0.0127%	0.0038	**ACT**
PJM	5/15/2022	4,864.45	4/1/2022	4/30/2022	15.00	15.00	30.00	0.0017%	0.0005	**ACT**
PJM	5/15/2022	(58.41)	4/1/2022	4/30/2022	15.00	15.00	30.00	0.0000%	(0.0000)	**ACT**
PJM	5/15/2022	(2,968.97)	4/1/2022	4/30/2022	15.00	15.00	30.00	-0.0011%	(0.0003)	**ACT**
PJM	6/15/2022	53.48	5/1/2022	5/31/2022	15.50	15.00	30.50	0.0000%	0.0000	**ACT**

Supplier Name	Payment Date	Invoice Amount	Service Start Date	Service End Date	Service Lead Time	Payment Lead Time	Total Lead Time	Weighting Factor	Weighted Lead Time	
PJM	6/15/2022	(0.09)	5/1/2022	5/31/2022	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	6/15/2022	321.80	5/1/2022	5/31/2022	15.50	15.00	30.50	0.0001%	0.0000	**ACT**
PJM	6/15/2022	493.00	5/1/2022	5/31/2022	15.50	15.00	30.50	0.0002%	0.0001	**ACT**
PJM	6/15/2022	2,396.81	5/1/2022	5/31/2022	15.50	15.00	30.50	0.0009%	0.0003	**ACT**
PJM	6/15/2022	33,261.97	5/1/2022	5/31/2022	15.50	15.00	30.50	0.0119%	0.0036	**ACT**
PJM	6/15/2022	(83.68)	5/1/2022	5/31/2022	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	6/15/2022	(0.08)	5/1/2022	5/31/2022	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	6/15/2022	186,316.93	5/1/2022	5/31/2022	15.50	15.00	30.50	0.0664%	0.0202	**ACT**
PJM	6/15/2022	134,213.66	5/1/2022	5/31/2022	15.50	15.00	30.50	0.0478%	0.0146	**ACT**
PJM	6/15/2022	0.44	5/1/2022	5/31/2022	15.50	15.00	30.50	0.0000%	0.0000	**ACT**
PJM	6/15/2022	342,874.87	5/1/2022	5/31/2022	15.50	15.00	30.50	0.1222%	0.0373	**ACT**
PJM	6/15/2022	(0.60)	5/1/2022	5/31/2022	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	6/15/2022	560,238.30	5/1/2022	5/31/2022	15.50	15.00	30.50	0.1996%	0.0609	**ACT**
PJM	6/15/2022	(461,192.99)	5/1/2022	5/31/2022	15.50	15.00	30.50	-0.1643%	(0.0501)	**ACT**
PJM	6/15/2022	(1,199.75)	5/1/2022	5/31/2022	15.50	15.00	30.50	-0.0004%	(0.0001)	**ACT**
PJM	6/15/2022	(560,237.40)	5/1/2022	5/31/2022	15.50	15.00	30.50	-0.1996%	(0.0609)	**ACT**
PJM	6/15/2022	(4.22)	5/1/2022	5/31/2022	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	6/15/2022	(13,547.17)	5/1/2022	5/31/2022	15.50	15.00	30.50	-0.0048%	(0.0015)	**ACT**
PJM	6/15/2022	(52,306.02)	5/1/2022	5/31/2022	15.50	15.00	30.50	-0.0186%	(0.0057)	**ACT**
PJM	6/15/2022	1,252,038.35	5/1/2022	5/31/2022	15.50	15.00	30.50	0.4461%	0.1361	**ACT**
PJM	6/15/2022	(73,754.05)	5/1/2022	5/31/2022	15.50	15.00	30.50	-0.0263%	(0.0080)	**ACT**
PJM	6/15/2022	0.45	5/1/2022	5/31/2022	15.50	15.00	30.50	0.0000%	0.0000	**ACT**
PJM	6/15/2022	(210,669.49)	5/1/2022	5/31/2022	15.50	15.00	30.50	-0.0751%	(0.0229)	**ACT**
PJM	6/15/2022	3,077,660.04	5/1/2022	5/31/2022	15.50	15.00	30.50	1.0966%	0.3345	**ACT**
PJM	6/15/2022	7,500,524.12	5/1/2022	5/31/2022	15.50	15.00	30.50	2.6724%	0.8151	**ACT**
AEG	7/8/2022	1,007,247.75	6/1/2022	6/30/2022	15.00	8.00	23.00	0.3589%	0.0825	**N/A**
AEG	7/8/2022	3,713,655.75	6/1/2022	6/30/2022	15.00	8.00	23.00	1.3232%	0.3043	**N/A**
PJM	6/15/2022	355.48	5/1/2022	5/31/2022	15.50	15.00	30.50	0.0001%	0.0000	**ACT**
PJM	6/15/2022	(3,552.09)	5/1/2022	5/31/2022	15.50	15.00	30.50	-0.0013%	(0.0004)	**ACT**
AEG	7/8/2022	280,528.00	6/1/2022	6/30/2022	15.00	8.00	23.00	0.1000%	0.0230	**N/A**
AEG	7/8/2022	308,994.00	6/1/2022	6/30/2022	15.00	8.00	23.00	0.1101%	0.0253	**N/A**
AEG	7/8/2022	2,059,677.00	6/1/2022	6/30/2022	15.00	8.00	23.00	0.7339%	0.1688	**N/A**
AEG	7/8/2022	1,037,165.00	6/1/2022	6/30/2022	15.00	8.00	23.00	0.3695%	0.0850	**N/A**
PJM	7/15/2022	198,018.70	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0706%	0.0212	**ACT**
PJM	7/15/2022	22,646.33	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0081%	0.0024	**ACT**
PJM	7/15/2022	(119,572.89)	6/1/2022	6/30/2022	15.00	15.00	30.00	-0.0426%	(0.0128)	**ACT**
PJM	7/15/2022	73,553.39	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0262%	0.0079	**ACT**
PJM	7/15/2022	25,673.97	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0091%	0.0027	**ACT**
PJM	7/15/2022	(11,655.71)	6/1/2022	6/30/2022	15.00	15.00	30.00	-0.0042%	(0.0012)	**ACT**
PJM	7/15/2022	1,801,538.57	6/1/2022	6/30/2022	15.00	15.00	30.00	0.6419%	0.1926	**ACT**
PJM	7/15/2022	1,203,977.50	6/1/2022	6/30/2022	15.00	15.00	30.00	0.4290%	0.1287	**ACT**
PJM	7/15/2022	31,514.86	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0112%	0.0034	**ACT**
PJM	7/15/2022	13,563.73	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0048%	0.0014	**ACT**
PJM	7/15/2022	(10,970.13)	6/1/2022	6/30/2022	15.00	15.00	30.00	-0.0039%	(0.0012)	**ACT**
PJM	7/15/2022	5,647.33	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0020%	0.0006	**ACT**
PJM	7/15/2022	26.81	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0000%	0.0000	**ACT**
PJM	7/15/2022	145.40	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0001%	0.0000	**ACT**
PJM	7/15/2022	229.74	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0001%	0.0000	**ACT**
PJM	7/15/2022	12,676.34	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0045%	0.0014	**ACT**
PJM	7/15/2022	30,762.04	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0110%	0.0033	**ACT**
PJM	7/15/2022	1,422.22	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0005%	0.0002	**ACT**
PJM	7/15/2022	(0.05)	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0000%	(0.0000)	**ACT**
PJM	7/15/2022	(34,972.24)	6/1/2022	6/30/2022	15.00	15.00	30.00	-0.0125%	(0.0037)	**ACT**
PJM	7/15/2022	(210,708.70)	6/1/2022	6/30/2022	15.00	15.00	30.00	-0.0751%	(0.0225)	**ACT**
PJM	7/15/2022	0.04	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0000%	0.0000	**ACT**
PJM	7/15/2022	509,761.30	6/1/2022	6/30/2022	15.00	15.00	30.00	0.1816%	0.0545	**ACT**
PJM	7/15/2022	4.28	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0000%	0.0000	**ACT**
PJM	7/15/2022	59,208.41	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0211%	0.0063	**ACT**
PJM	7/15/2022	(49,789.44)	6/1/2022	6/30/2022	15.00	15.00	30.00	-0.0177%	(0.0053)	**ACT**
PJM	7/15/2022	(223,120.34)	6/1/2022	6/30/2022	15.00	15.00	30.00	-0.0795%	(0.0238)	**ACT**
PJM	7/15/2022	578,912.91	6/1/2022	6/30/2022	15.00	15.00	30.00	0.2063%	0.0619	**ACT**
PJM	7/15/2022	(851,056.31)	6/1/2022	6/30/2022	15.00	15.00	30.00	-0.3032%	(0.0910)	**ACT**
PJM	7/15/2022	(885.57)	6/1/2022	6/30/2022	15.00	15.00	30.00	-0.0003%	(0.0001)	**ACT**
PJM	7/15/2022	(578,911.98)	6/1/2022	6/30/2022	15.00	15.00	30.00	-0.2063%	(0.0619)	**ACT**
PJM	7/15/2022	(371.02)	6/1/2022	6/30/2022	15.00	15.00	30.00	-0.0001%	(0.0000)	**ACT**
PJM	7/15/2022	(841.15)	6/1/2022	6/30/2022	15.00	15.00	30.00	-0.0003%	(0.0001)	**ACT**
PJM	7/15/2022	1,374,634.32	6/1/2022	6/30/2022	15.00	15.00	30.00	0.4898%	0.1469	**ACT**
PJM	7/15/2022	(58,277.93)	6/1/2022	6/30/2022	15.00	15.00	30.00	-0.0208%	(0.0062)	**ACT**
PJM	7/15/2022	0.03	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0000%	0.0000	**ACT**
PJM	7/15/2022	(343,631.03)	6/1/2022	6/30/2022	15.00	15.00	30.00	-0.1224%	(0.0367)	**ACT**
PJM	7/15/2022	(467.35)	6/1/2022	6/30/2022	15.00	15.00	30.00	-0.0002%	(0.0000)	**ACT**
PJM	7/15/2022	(476.53)	6/1/2022	6/30/2022	15.00	15.00	30.00	-0.0002%	(0.0001)	**ACT**
PJM	7/15/2022	2,496,373.75	6/1/2022	6/30/2022	15.00	15.00	30.00	0.8895%	0.2668	**ACT**
PJM	7/15/2022	8,965,276.41	6/1/2022	6/30/2022	15.00	15.00	30.00	3.1943%	0.9583	**ACT**
AEG	8/8/2022	2,380,340.50	7/1/2022	7/31/2022	15.50	8.00	23.50	0.8481%	0.1993	**N/A**
AEG	8/8/2022	4,728,560.50	7/1/2022	7/31/2022	15.50	8.00	23.50	1.6848%	0.3959	**N/A**
PJM	7/15/2022	(70.90)	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0000%	(0.0000)	**ACT**
PJM	7/15/2022	(4,741.50)	6/1/2022	6/30/2022	15.00	15.00	30.00	-0.0017%	(0.0005)	**ACT**
AEG	8/8/2022	2,938,942.00	7/1/2022	7/31/2022	15.50	8.00	23.50	1.0471%	0.2461	**N/A**
AEG	8/8/2022	1,835,857.00	7/1/2022	7/31/2022	15.50	8.00	23.50	0.6541%	0.1537	**N/A**
AEG	8/8/2022	267,223.00	7/1/2022	7/31/2022	15.50	8.00	23.50	0.0952%	0.0224	**N/A**
AEG	8/8/2022	217,623.00	7/1/2022	7/31/2022	15.50	8.00	23.50	0.0775%	0.0182	**N/A**
PJM	7/15/2022	193,770.00	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0690%	0.0207	**ACT**
PJM	7/15/2022	(0.02)	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0000%	(0.0000)	**ACT**
PJM	7/15/2022	(119,573.10)	6/1/2022	6/30/2022	15.00	15.00	30.00	-0.0426%	(0.0128)	**ACT**
PJM	7/15/2022	69,889.80	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0249%	0.0075	**ACT**
PJM	7/15/2022	(0.01)	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0000%	(0.0000)	**ACT**
PJM	7/15/2022	70,097.66	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0250%	0.0075	**ACT**
PJM	7/15/2022	(17,869.93)	6/1/2022	6/30/2022	15.00	15.00	30.00	-0.0064%	(0.0019)	**ACT**
PJM	7/15/2022	1,603,280.06	6/1/2022	6/30/2022	15.00	15.00	30.00	0.5712%	0.1714	**ACT**
PJM	7/15/2022	816,844.29	6/1/2022	6/30/2022	15.00	15.00	30.00	0.2910%	0.0873	**ACT**
PJM	7/15/2022	236,250.43	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0842%	0.0253	**ACT**
PJM	7/15/2022	0.02	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0000%	0.0000	**ACT**
PJM	7/15/2022	11,828.04	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0042%	0.0013	**ACT**
PJM	7/15/2022	(43,183.72)	6/1/2022	6/30/2022	15.00	15.00	30.00	-0.0154%	(0.0046)	**ACT**
PJM	7/15/2022	11,140.73	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0040%	0.0012	**ACT**
PJM	7/15/2022	85.58	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0000%	0.0000	**ACT**
PJM	7/15/2022	897.59	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0003%	0.0001	**ACT**
PJM	7/15/2022	298.44	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0001%	0.0000	**ACT**
PJM	7/15/2022	22,475.12	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0080%	0.0024	**ACT**
PJM	7/15/2022	0.06	6/1/2022	6/30/2022	15.00	15.00	30.00	0.0000%	0.0000	**ACT**
PJM	8/15/2022	52,803.27	7/1/2022	7/31/2022	15.50	15.00	30.50	0.0188%	0.0057	**ACT**
PJM	8/15/2022	(536.95)	7/1/2022	7/31/2022	15.50	15.00	30.50	-0.0002%	(0.0001)	**ACT**
PJM	8/15/2022	0.09	7/1/2022	7/31/2022	15.50	15.00	30.50	0.0000%	0.0000	**ACT**
PJM	8/15/2022	1,795,544.60	7/1/2022	7/31/2022	15.50	15.00	30.50	0.6398%	0.1951	**ACT**
PJM	8/15/2022	28,160.54	7/1/2022	7/31/2022	15.50	15.00	30.50	0.0100%	0.0031	**ACT**
PJM	8/15/2022	0.60	7/1/2022	7/31/2022	15.50	15.00	30.50	0.0000%	0.0000	**ACT**
PJM	8/15/2022	278,581.37	7/1/2022	7/31/2022	15.50	15.00	30.50	0.0993%	0.0303	**ACT**
PJM	8/15/2022	36.03	7/1/2022	7/31/2022	15.50	15.00	30.50	0.0000%	0.0000	**ACT**
PJM	8/15/2022	(740.71)	7/1/2022	7/31/2022	15.50	15.00	30.50	-0.0003%	(0.0001)	**ACT**
PJM	8/15/2022	890,451.00	7/1/2022	7/31/2022	15.50	15.00	30.50	0.3173%	0.0968	**ACT**
PJM	8/15/2022	(1,762,810.95)	7/1/2022	7/31/2022	15.50	15.00	30.50	-0.6281%	(0.1916)	**ACT**
PJM	8/15/2022	(625.21)	7/1/2022	7/31/2022	15.50	15.00	30.50	-0.0002%	(0.0001)	**ACT**
PJM	8/15/2022	625.22	7/1/2022	7/31/2022	15.50	15.00	30.50	0.0002%	0.0001	**ACT**
PJM	8/15/2022	(890,451.00)	7/1/2022	7/31/2022	15.50	15.00	30.50	-0.3173%	(0.0968)	**ACT**
PJM	8/15/2022	(150,469.57)	7/1/2022	7/31/2022	15.50	15.00	30.50	-0.0536%	(0.0164)	**ACT**
PJM	8/15/2022	(1,468.34)	7/1/2022	7/31/2022	15.50	15.00	30.50	-0.0005%	(0.0002)	**ACT**
PJM	8/15/2022	(20,439.70)	7/1/2022	7/31/2022	15.50	15.00	30.50	-0.0073%	(0.0022)	**ACT**
PJM	8/15/2022	1,744,047.08	7/1/2022	7/31/2022	15.50	15.00	30.50	0.6214%	0.1895	**ACT**
PJM	8/15/2022	(21,493.21)	7/1/2022	7/31/2022	15.50	15.00	30.50	-0.0077%	(0.0023)	**ACT**

Supplier Name	Payment Date	Invoice Amount	Service Start Date	Service End Date	Service Lead Time	Payment Lead Time	Total Lead Time	Weighting Factor	Weighted Lead Time	
PJM	8/15/2022	0.94	7/1/2022	7/31/2022	15.50	15.00	30.50	0.0000%	0.0000	**ACT**
PJM	8/15/2022	(385,194.11)	7/1/2022	7/31/2022	15.50	15.00	30.50	-0.1372%	(0.0419)	**ACT**
PJM	8/15/2022	(1,256.17)	7/1/2022	7/31/2022	15.50	15.00	30.50	-0.0004%	(0.0001)	**ACT**
PJM	8/15/2022	2,393,487.98	7/1/2022	7/31/2022	15.50	15.00	30.50	0.8528%	0.2601	**ACT**
PJM	8/15/2022	4,735,785.05	7/1/2022	7/31/2022	15.50	15.00	30.50	1.6874%	0.5146	**ACT**
AEG	9/9/2022	1,548,598.39	8/1/2022	8/31/2022	15.50	9.00	24.50	0.5518%	0.1352	**N/A**
AEG	9/9/2022	4,490,781.39	8/1/2022	8/31/2022	15.50	9.00	24.50	1.6001%	0.3920	**N/A**
PJM	8/15/2022	724.24	7/1/2022	7/31/2022	15.50	15.00	30.50	0.0003%	0.0001	**ACT**
PJM	8/15/2022	0.19	7/1/2022	7/31/2022	15.50	15.00	30.50	0.0000%	0.0000	**ACT**
PJM	8/15/2022	2,948.12	7/1/2022	7/31/2022	15.50	15.00	30.50	0.0011%	0.0003	**ACT**
PJM	8/15/2022	1.03	7/1/2022	7/31/2022	15.50	15.00	30.50	0.0000%	0.0000	**ACT**
AEG	9/9/2022	288,221.00	8/1/2022	8/31/2022	15.50	9.00	24.50	0.1027%	0.0252	**N/A**
AEG	9/9/2022	251,109.00	8/1/2022	8/31/2022	15.50	9.00	24.50	0.0895%	0.0219	**N/A**
AEG	9/9/2022	1,138,682.00	8/1/2022	8/31/2022	15.50	9.00	24.50	0.4057%	0.0994	**N/A**
AEG	9/9/2022	2,607,285.00	8/1/2022	8/31/2022	15.50	9.00	24.50	0.9290%	0.2276	**N/A**
PJM	8/15/2022	193,958.01	7/1/2022	7/31/2022	15.50	15.00	30.50	0.0691%	0.0211	**ACT**
PJM	8/15/2022	(119,572.89)	7/1/2022	7/31/2022	15.50	15.00	30.50	-0.0426%	(0.0130)	**ACT**
PJM	8/15/2022	69,787.20	7/1/2022	7/31/2022	15.50	15.00	30.50	0.0249%	0.0076	**ACT**
PJM	8/15/2022	13,002.32	7/1/2022	7/31/2022	15.50	15.00	30.50	0.0046%	0.0014	**ACT**
PJM	8/15/2022	(4.03)	7/1/2022	7/31/2022	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	8/15/2022	(8,128.43)	7/1/2022	7/31/2022	15.50	15.00	30.50	-0.0029%	(0.0009)	**ACT**
PJM	8/15/2022	4,583,911.33	7/1/2022	7/31/2022	15.50	15.00	30.50	1.6332%	0.4981	**ACT**
PJM	8/15/2022	2,277,522.55	7/1/2022	7/31/2022	15.50	15.00	30.50	0.8115%	0.2475	**ACT**
PJM	8/15/2022	30,460.83	7/1/2022	7/31/2022	15.50	15.00	30.50	0.0109%	0.0033	**ACT**
PJM	8/15/2022	4,938.54	7/1/2022	7/31/2022	15.50	15.00	30.50	0.0018%	0.0005	**ACT**
PJM	8/15/2022	(8,323.20)	7/1/2022	7/31/2022	15.50	15.00	30.50	-0.0030%	(0.0009)	**ACT**
PJM	8/15/2022	12,238.18	7/1/2022	7/31/2022	15.50	15.00	30.50	0.0044%	0.0013	**ACT**
PJM	8/15/2022	(0.62)	7/1/2022	7/31/2022	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	8/15/2022	8,936.38	7/1/2022	7/31/2022	15.50	15.00	30.50	0.0032%	0.0010	**ACT**
PJM	8/15/2022	548.54	7/1/2022	7/31/2022	15.50	15.00	30.50	0.0002%	0.0001	**ACT**
PJM	8/15/2022	54,936.59	7/1/2022	7/31/2022	15.50	15.00	30.50	0.0196%	0.0060	**ACT**
PJM	8/15/2022	13.16	7/1/2022	7/31/2022	15.50	15.00	30.50	0.0000%	0.0000	**ACT**
PJM	8/15/2022	86,375.21	7/1/2022	7/31/2022	15.50	15.00	30.50	0.0308%	0.0094	**ACT**
PJM	8/15/2022	486.23	7/1/2022	7/31/2022	15.50	15.00	30.50	0.0002%	0.0001	**ACT**
PJM	8/15/2022	(0.30)	7/1/2022	7/31/2022	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	8/15/2022	(0.59)	7/1/2022	7/31/2022	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	9/15/2022	222,122.01	8/1/2022	8/31/2022	15.50	15.00	30.50	0.0791%	0.0241	**ACT**
PJM	9/15/2022	1,199,812.53	8/1/2022	8/31/2022	15.50	15.00	30.50	0.4275%	0.1304	**ACT**
PJM	9/15/2022	(298,060.07)	8/1/2022	8/31/2022	15.50	15.00	30.50	-0.1062%	(0.0324)	**ACT**
PJM	9/15/2022	169.84	8/1/2022	8/31/2022	15.50	15.00	30.50	0.0001%	0.0000	**ACT**
PJM	9/15/2022	(327.96)	8/1/2022	8/31/2022	15.50	15.00	30.50	-0.0001%	(0.0000)	**ACT**
PJM	9/15/2022	(36.37)	8/1/2022	8/31/2022	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	9/15/2022	(170,508.85)	8/1/2022	8/31/2022	15.50	15.00	30.50	-0.0608%	(0.0185)	**ACT**
PJM	9/15/2022	920,132.70	8/1/2022	8/31/2022	15.50	15.00	30.50	0.3278%	0.1000	**ACT**
PJM	9/15/2022	(1,060,680.37)	8/1/2022	8/31/2022	15.50	15.00	30.50	-0.3779%	(0.1153)	**ACT**
PJM	9/15/2022	(304.12)	8/1/2022	8/31/2022	15.50	15.00	30.50	-0.0001%	(0.0000)	**ACT**
PJM	9/15/2022	(920,132.70)	8/1/2022	8/31/2022	15.50	15.00	30.50	-0.3278%	(0.1000)	**ACT**
PJM	9/15/2022	(613.19)	8/1/2022	8/31/2022	15.50	15.00	30.50	-0.0002%	(0.0001)	**ACT**
PJM	9/15/2022	(18,382.51)	8/1/2022	8/31/2022	15.50	15.00	30.50	-0.0065%	(0.0020)	**ACT**
PJM	9/15/2022	2,082,519.34	8/1/2022	8/31/2022	15.50	15.00	30.50	0.7420%	0.2263	**ACT**
PJM	9/15/2022	(279,321.78)	8/1/2022	8/31/2022	15.50	15.00	30.50	-0.0995%	(0.0304)	**ACT**
PJM	9/15/2022	(25.31)	8/1/2022	8/31/2022	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	9/15/2022	(500,367.28)	8/1/2022	8/31/2022	15.50	15.00	30.50	-0.1783%	(0.0544)	**ACT**
PJM	9/15/2022	(466.29)	8/1/2022	8/31/2022	15.50	15.00	30.50	-0.0002%	(0.0001)	**ACT**
PJM	9/15/2022	8.41	8/1/2022	8/31/2022	15.50	15.00	30.50	0.0000%	0.0000	**ACT**
PJM	9/15/2022	(526.88)	8/1/2022	8/31/2022	15.50	15.00	30.50	-0.0002%	(0.0001)	**ACT**
PJM	9/15/2022	2,142,952.84	8/1/2022	8/31/2022	15.50	15.00	30.50	0.7635%	0.2329	**ACT**
PJM	9/15/2022	12,141,814.17	8/1/2022	8/31/2022	15.50	15.00	30.50	4.3261%	1.3195	**ACT**
PJM	9/15/2022	518.75	8/1/2022	8/31/2022	15.50	15.00	30.50	0.0002%	0.0001	**ACT**
AEG	10/11/2022	1,399,369.04	9/1/2022	9/30/2022	15.00	11.00	26.00	0.4986%	0.1296	**N/A**
AEG	10/11/2022	4,370,820.00	9/1/2022	9/30/2022	15.00	11.00	26.00	1.5573%	0.4049	**N/A**
PJM	9/15/2022	(226.34)	8/1/2022	8/31/2022	15.50	15.00	30.50	-0.0001%	(0.0000)	**ACT**
PJM	9/15/2022	(6,959.63)	8/1/2022	8/31/2022	15.50	15.00	30.50	-0.0025%	(0.0008)	**ACT**
AEG	10/11/2022	184,750.00	9/1/2022	9/30/2022	15.00	11.00	26.00	0.0658%	0.0171	**N/A**
AEG	10/11/2022	196,620.00	9/1/2022	9/30/2022	15.00	11.00	26.00	0.0701%	0.0182	**N/A**
AEG	10/11/2022	231,437.00	9/1/2022	9/30/2022	15.00	11.00	26.00	0.0825%	0.0214	**N/A**
PJM	9/15/2022	191,739.03	8/1/2022	8/31/2022	15.50	15.00	30.50	0.0683%	0.0208	**ACT**
PJM	9/15/2022	(119,572.89)	8/1/2022	8/31/2022	15.50	15.00	30.50	-0.0426%	(0.0130)	**ACT**
PJM	9/15/2022	69,147.67	8/1/2022	8/31/2022	15.50	15.00	30.50	0.0246%	0.0075	**ACT**
PJM	9/15/2022	24,144.88	8/1/2022	8/31/2022	15.50	15.00	30.50	0.0086%	0.0026	**ACT**
PJM	9/15/2022	1.24	8/1/2022	8/31/2022	15.50	15.00	30.50	0.0000%	0.0000	**ACT**
PJM	9/15/2022	(16,175.22)	8/1/2022	8/31/2022	15.50	15.00	30.50	-0.0058%	(0.0018)	**ACT**
PJM	9/15/2022	4,194,776.42	8/1/2022	8/31/2022	15.50	15.00	30.50	1.4946%	0.4559	**ACT**
PJM	9/15/2022	806,746.37	8/1/2022	8/31/2022	15.50	15.00	30.50	0.2874%	0.0877	**ACT**
PJM	9/15/2022	27,729.16	8/1/2022	8/31/2022	15.50	15.00	30.50	0.0099%	0.0030	**ACT**
PJM	9/15/2022	8,528.80	8/1/2022	8/31/2022	15.50	15.00	30.50	0.0030%	0.0009	**ACT**
PJM	9/15/2022	(21.91)	8/1/2022	8/31/2022	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	9/15/2022	(3,361.77)	8/1/2022	8/31/2022	15.50	15.00	30.50	-0.0012%	(0.0004)	**ACT**
PJM	9/15/2022	11,929.39	8/1/2022	8/31/2022	15.50	15.00	30.50	0.0043%	0.0013	**ACT**
PJM	9/15/2022	(0.10)	8/1/2022	8/31/2022	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	9/15/2022	6,260.24	8/1/2022	8/31/2022	15.50	15.00	30.50	0.0022%	0.0007	**ACT**
PJM	9/15/2022	2,792.36	8/1/2022	8/31/2022	15.50	15.00	30.50	0.0010%	0.0003	**ACT**
PJM	9/15/2022	39,063.79	8/1/2022	8/31/2022	15.50	15.00	30.50	0.0139%	0.0042	**ACT**
PJM	9/15/2022	73,190.49	8/1/2022	8/31/2022	15.50	15.00	30.50	0.0261%	0.0080	**ACT**
PJM	9/15/2022	298.75	8/1/2022	8/31/2022	15.50	15.00	30.50	0.0001%	0.0000	**ACT**
PJM	9/15/2022	(2.25)	8/1/2022	8/31/2022	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	9/15/2022	2.17	8/1/2022	8/31/2022	15.50	15.00	30.50	0.0000%	0.0000	**ACT**
PJM	9/15/2022	776,129.25	8/1/2022	8/31/2022	15.50	15.00	30.50	0.2765%	0.0843	**ACT**
PJM	9/15/2022	(937,556.94)	8/1/2022	8/31/2022	15.50	15.00	30.50	-0.3341%	(0.1019)	**ACT**
PJM	9/15/2022	(0.81)	8/1/2022	8/31/2022	15.50	15.00	30.50	0.0000%	(0.0000)	**ACT**
PJM	9/15/2022	268,141.31	8/1/2022	8/31/2022	15.50	15.00	30.50	0.0955%	0.0291	**ACT**
PJM	9/15/2022	717.76	8/1/2022	8/31/2022	15.50	15.00	30.50	0.0003%	0.0001	**ACT**
PJM	9/15/2022	0.31	8/1/2022	8/31/2022	15.50	15.00	30.50	0.0000%	0.0000	**ACT**
PJM	9/15/2022	(6,359.49)	8/1/2022	8/31/2022	15.50	15.00	30.50	-0.0023%	(0.0007)	**ACT**
PJM	10/15/2022	920,132.70	9/1/2022	9/30/2022	15.00	15.00	30.00	0.3278%	0.0984	**ACT**
PJM	10/15/2022	(644,111.00)	9/1/2022	9/30/2022	15.00	15.00	30.00	-0.2295%	(0.0688)	**ACT**
PJM	10/15/2022	(5,362.71)	9/1/2022	9/30/2022	15.00	15.00	30.00	-0.0019%	(0.0006)	**ACT**
PJM	10/15/2022	5,362.69	9/1/2022	9/30/2022	15.00	15.00	30.00	0.0019%	0.0006	**ACT**
PJM	10/15/2022	(920,132.70)	9/1/2022	9/30/2022	15.00	15.00	30.00	-0.3278%	(0.0984)	**ACT**
PJM	10/15/2022	0.02	9/1/2022	9/30/2022	15.00	15.00	30.00	0.0000%	0.0000	**ACT**
PJM	10/15/2022	(2,125.20)	9/1/2022	9/30/2022	15.00	15.00	30.00	-0.0008%	(0.0002)	**ACT**
PJM	10/15/2022	(22,593.44)	9/1/2022	9/30/2022	15.00	15.00	30.00	-0.0081%	(0.0024)	**ACT**
PJM	10/15/2022	2,010,483.22	9/1/2022	9/30/2022	15.00	15.00	30.00	0.7163%	0.2149	**ACT**
PJM	10/15/2022	(293,446.14)	9/1/2022	9/30/2022	15.00	15.00	30.00	-0.1046%	(0.0314)	**ACT**
PJM	10/15/2022	(3.01)	9/1/2022	9/30/2022	15.00	15.00	30.00	0.0000%	(0.0000)	**ACT**
PJM	10/15/2022	(511,224.23)	9/1/2022	9/30/2022	15.00	15.00	30.00	-0.1821%	(0.0546)	**ACT**
PJM	10/15/2022	1,099.72	9/1/2022	9/30/2022	15.00	15.00	30.00	0.0004%	0.0001	**ACT**
PJM	10/15/2022	(3.75)	9/1/2022	9/30/2022	15.00	15.00	30.00	0.0000%	(0.0000)	**ACT**
PJM	10/15/2022	(515.82)	9/1/2022	9/30/2022	15.00	15.00	30.00	-0.0002%	(0.0001)	**ACT**
		$ 280,663,135.39							27.92	

KENTUCKY POWER COMPANY
LEAD LAG STUDY
AP FLOAT

Float Lead Time: 12.73 days

Check Number	Date	Reconciled	Amount	Unweighted Lead	Weighting Factor	Weighted Lead
(A)	(B)	(C)	(D)	(E)	(F)	(G)
3000063709	10/1/2021	10/12/2021	6.71	11.00	0.000%	0.000003
3000063710	10/1/2021	10/14/2021	8,400.00	13.00	0.030%	0.003885
3000063711	10/1/2021	10/18/2021	480.00	17.00	0.002%	0.000290
3000063713	10/1/2021	11/4/2021	1,337.66	34.00	0.005%	0.001618
3000063714	10/4/2021	10/18/2021	48,234.60	14.00	0.172%	0.024025
3000063715	10/4/2021	10/21/2021	526.06	17.00	0.002%	0.000318
3000063716	10/4/2021	10/19/2021	904.65	15.00	0.003%	0.000483
3000063717	10/4/2021	10/18/2021	23,687.30	14.00	0.084%	0.011798
3000063718	10/5/2021	10/13/2021	97.37	8.00	0.000%	0.000028
3000063719	10/6/2021	10/21/2021	300.00	15.00	0.001%	0.000160
3000063720	10/6/2021	10/14/2021	300.00	8.00	0.001%	0.000085
3000063721	10/6/2021	11/16/2021	300.00	41.00	0.001%	0.000438
3000063722	10/6/2021	10/26/2021	1,000.00	20.00	0.004%	0.000712
3000063723	10/8/2021	10/25/2021	300.00	17.00	0.001%	0.000181
3000063724	10/8/2021	10/15/2021	7.00	7.00	0.000%	0.000002
3000063725	10/8/2021	10/13/2021	100.00	5.00	0.000%	0.000018
3000063726	10/8/2021	10/13/2021	1,489.85	5.00	0.005%	0.000265
3000063727	10/8/2021	10/13/2021	542.50	5.00	0.002%	0.000097
3000063728	10/8/2021	10/14/2021	358.89	6.00	0.001%	0.000077
3000063729	10/11/2021	11/1/2021	2,600.00	21.00	0.009%	0.001943
3000063730	10/12/2021	10/19/2021	7,025.75	7.00	0.025%	0.001750
3000063731	10/12/2021	10/20/2021	24,388.70	8.00	0.087%	0.006942
3000063732	10/12/2021	10/27/2021	4,075.63	15.00	0.015%	0.002175
3000063733	10/12/2021	10/21/2021	153.65	9.00	0.001%	0.000049
3000063734	10/12/2021	10/25/2021	2,238.92	13.00	0.008%	0.001036
3000063735	10/12/2021	10/20/2021	11,019.77	8.00	0.039%	0.003136
3000063736	10/12/2021	10/21/2021	20,867.70	9.00	0.074%	0.006682
3000063737	10/12/2021	10/22/2021	8,142.06	10.00	0.029%	0.002897
3000063738	10/13/2021	10/22/2021	89.48	9.00	0.000%	0.000029
3000063739	10/13/2021	11/22/2021	100.00	40.00	0.000%	0.000142
3000063741	10/13/2021	11/1/2021	200.00	19.00	0.001%	0.000135
3000063742	10/13/2021	10/28/2021	100.00	15.00	0.000%	0.000053
3000063743	10/13/2021	10/29/2021	50.00	16.00	0.000%	0.000028
3000063744	10/13/2021	11/1/2021	400.00	19.00	0.001%	0.000270
3000063745	10/13/2021	10/28/2021	50.00	15.00	0.000%	0.000027
3000063746	10/13/2021	11/3/2021	100.00	21.00	0.000%	0.000075
3000063747	10/13/2021	11/8/2021	800.00	26.00	0.003%	0.000740
3000063748	10/13/2021	11/1/2021	250.00	19.00	0.001%	0.000169
3000063750	10/14/2021	11/10/2021	41.25	27.00	0.000%	0.000040
3000063751	10/14/2021	10/21/2021	2,490.00	7.00	0.009%	0.000620
3000063752	10/14/2021	11/2/2021	170.67	19.00	0.001%	0.000115
3000063753	10/15/2021	10/25/2021	12,666.86	10.00	0.045%	0.004507
3000063754	10/15/2021	10/25/2021	11,866.80	10.00	0.042%	0.004222
3000063755	10/15/2021	10/22/2021	1,675.54	7.00	0.006%	0.000417
3000063756	10/15/2021	10/22/2021	5,768.48	7.00	0.021%	0.001437
3000063757	10/15/2021	10/25/2021	14,299.61	10.00	0.051%	0.005087
3000063759	10/18/2021	10/26/2021	720.81	8.00	0.003%	0.000205
3000063760	10/18/2021	10/20/2021	1,500.00	2.00	0.005%	0.000107
3000063761	10/18/2021	11/5/2021	1,337.66	18.00	0.005%	0.000857
3000063762	10/20/2021	10/27/2021	3,829.77	7.00	0.014%	0.000954
3000063763	10/20/2021	10/27/2021	335,628.97	7.00	1.194%	0.083586
3000063764	10/20/2021	10/27/2021	173,668.00	7.00	0.618%	0.043251
3000063765	10/20/2021	10/26/2021	36,942.18	6.00	0.131%	0.007886
3000063766	10/20/2021	10/27/2021	14,400.00	7.00	0.051%	0.003586
3000063767	10/20/2021	11/4/2021	13,485.05	15.00	0.048%	0.007196
3000063768	10/21/2021	10/28/2021	909.95	7.00	0.003%	0.000227

Check Number	Date	Reconciled	Amount	Unweighted Lead	Weighting Factor	Weighted Lead
3000063769	10/21/2021	11/22/2021	2,688.00	32.00	0.010%	0.003060
3000063770	10/21/2021	10/27/2021	7.00	6.00	0.000%	0.000001
3000063771	10/21/2021	10/26/2021	100.00	5.00	0.000%	0.000018
3000063772	10/21/2021	10/25/2021	1,489.85	4.00	0.005%	0.000212
3000063773	10/21/2021	10/26/2021	542.50	5.00	0.002%	0.000097
3000063774	10/21/2021	10/28/2021	237.06	7.00	0.001%	0.000059
3000063775	10/22/2021	11/1/2021	3,600.00	10.00	0.013%	0.001281
3000063776	10/22/2021	11/9/2021	3,488.28	18.00	0.012%	0.002234
3000063777	10/22/2021	11/4/2021	1,872.00	13.00	0.007%	0.000866
3000063778	10/25/2021	11/2/2021	94.98	8.00	0.000%	0.000027
3000063779	10/25/2021	11/1/2021	1,095.92	7.00	0.004%	0.000273
3000063780	10/27/2021	11/3/2021	768.87	7.00	0.003%	0.000191
3000063781	10/27/2021	11/3/2021	1,500.00	7.00	0.005%	0.000374
3000063782	10/27/2021	11/22/2021	5,984.00	26.00	0.021%	0.005535
3000063783	10/27/2021	11/24/2021	94.16	28.00	0.000%	0.000094
3000063784	10/27/2021	11/17/2021	320.26	21.00	0.001%	0.000239
3000063785	10/27/2021	10/29/2021	8,000.00	2.00	0.028%	0.000569
3000063786	10/27/2021	11/1/2021	38,000.00	5.00	0.135%	0.006760
3000063787	10/29/2021	11/15/2021	5,000.00	17.00	0.018%	0.003024
3000063788	10/29/2021	11/12/2021	1,536.57	14.00	0.005%	0.000765
3000063789	10/29/2021	11/5/2021	658.97	7.00	0.002%	0.000164
3000063790	11/1/2021	11/15/2021	32.95	14.00	0.000%	0.000016
3000063791	11/2/2021	11/17/2021	2,500.00	15.00	0.009%	0.001334
3000063792	11/2/2021	11/23/2021	17,537.11	21.00	0.062%	0.013102
3000063793	11/2/2021	11/22/2021	3,460.00	20.00	0.012%	0.002462
3000063794	11/3/2021	11/9/2021	2,445.00	6.00	0.009%	0.000522
3000063795	11/4/2021	11/15/2021	79.50	11.00	0.000%	0.000031
3000063796	11/4/2021	11/16/2021	89.50	12.00	0.000%	0.000038
3000063797	11/4/2021	11/23/2021	51,423.36	19.00	0.183%	0.034761
3000063798	11/4/2021	11/9/2021	2,516.00	5.00	0.009%	0.000448
3000063799	11/4/2021	11/10/2021	7.00	6.00	0.000%	0.000001
3000063800	11/4/2021	11/9/2021	100.00	5.00	0.000%	0.000018
3000063801	11/4/2021	11/9/2021	1,489.85	5.00	0.005%	0.000265
3000063802	11/4/2021	11/9/2021	542.50	5.00	0.002%	0.000097
3000063803	11/4/2021	11/9/2021	297.82	5.00	0.001%	0.000053
3000063804	11/5/2021	11/17/2021	93.52	12.00	0.000%	0.000040
3000063805	11/5/2021	12/8/2021	500.00	33.00	0.002%	0.000587
3000063806	11/5/2021	11/22/2021	154.44	17.00	0.001%	0.000093
3000063807	11/5/2021	11/12/2021	6,217.20	7.00	0.022%	0.001548
3000063808	11/9/2021	11/22/2021	7,200.00	13.00	0.026%	0.003330
3000063809	11/9/2021	11/26/2021	975.00	17.00	0.003%	0.000590
3000063810	11/9/2021	11/23/2021	975.00	14.00	0.003%	0.000486
3000063811	11/9/2021	11/19/2021	975.00	10.00	0.003%	0.000347
3000063812	11/9/2021	11/22/2021	805.00	13.00	0.003%	0.000372
3000063813	11/10/2021	11/24/2021	100.00	14.00	0.000%	0.000050
3000063814	11/10/2021	1/21/2022	12,600.00	72.00	0.045%	0.032276
3000063815	11/10/2021	11/19/2021	500.00	9.00	0.002%	0.000160
3000063816	11/10/2021	12/1/2021	500.00	21.00	0.002%	0.000374
3000063817	11/11/2021	11/22/2021	685.49	11.00	0.002%	0.000268
3000063818	11/11/2021	11/22/2021	200.00	11.00	0.001%	0.000078
3000063819	11/11/2021	11/15/2021	2,500.00	4.00	0.009%	0.000356
3000063820	11/12/2021	12/2/2021	1,170.00	20.00	0.004%	0.000833
3000063821	11/12/2021	11/22/2021	2,216.13	10.00	0.008%	0.000788
3000063822	11/12/2021	11/23/2021	5,742.00	11.00	0.020%	0.002247
3000063823	11/12/2021	11/23/2021	19,274.61	11.00	0.069%	0.007543
3000063824	11/12/2021	12/7/2021	4,079.91	25.00	0.015%	0.003629
3000063825	11/12/2021	11/23/2021	2,028.82	11.00	0.007%	0.000794
3000063826	11/12/2021	11/30/2021	18,881.21	18.00	0.067%	0.012091
3000063827	11/12/2021	11/30/2021	7,028.78	18.00	0.025%	0.004501
3000063828	11/12/2021	12/17/2021	250.00	35.00	0.001%	0.000311
3000063829	11/12/2021	12/1/2021	50.00	19.00	0.000%	0.000034
3000063830	11/12/2021	12/2/2021	450.00	20.00	0.002%	0.000320
3000063831	11/12/2021	12/1/2021	150.00	19.00	0.001%	0.000101
3000063832	11/15/2021	11/29/2021	494.09	14.00	0.002%	0.000246
3000063834	11/15/2021	11/22/2021	8,392.43	7.00	0.030%	0.002090

Check Number	Date	Reconciled	Amount	Unweighted Lead	Weighting Factor	Weighted Lead
3000063835	11/15/2021	12/1/2021	235.88	16.00	0.001%	0.000134
3000063836	11/15/2021	11/24/2021	8,300.00	9.00	0.030%	0.002658
3000063837	11/15/2021	11/24/2021	50.00	9.00	0.000%	0.000016
3000063838	11/16/2021	11/24/2021	436.01	8.00	0.002%	0.000124
3000063839	11/16/2021	12/1/2021	3,469.44	15.00	0.012%	0.001852
3000063840	11/17/2021	11/23/2021	600.00	6.00	0.002%	0.000128
3000063841	11/17/2021	11/24/2021	144.00	7.00	0.001%	0.000036
3000063842	11/17/2021	12/6/2021	2,857.85	19.00	0.010%	0.001932
3000063843	11/17/2021	11/24/2021	636,805.24	7.00	2.266%	0.158591
3000063844	11/18/2021	11/26/2021	7.00	8.00	0.000%	0.000002
3000063845	11/18/2021	11/23/2021	100.00	5.00	0.000%	0.000018
3000063846	11/18/2021	11/23/2021	1,489.85	5.00	0.005%	0.000265
3000063847	11/18/2021	11/23/2021	542.50	5.00	0.002%	0.000097
3000063848	11/18/2021	11/24/2021	650.96	6.00	0.002%	0.000139
3000063849	11/19/2021	12/6/2021	1,108.38	17.00	0.004%	0.000670
3000063850	11/19/2021	12/7/2021	4,416.60	18.00	0.016%	0.002828
3000063851	11/19/2021	11/30/2021	1,800.00	11.00	0.006%	0.000704
3000063852	11/19/2021	12/1/2021	2,933.50	12.00	0.010%	0.001252
3000063853	11/22/2021	12/6/2021	1,095.92	14.00	0.004%	0.000546
3000063854	11/22/2021	12/20/2021	340.00	28.00	0.001%	0.000339
3000063855	11/23/2021	12/8/2021	92,150.34	15.00	0.328%	0.049177
3000063856	11/23/2021	12/9/2021	3,996.00	16.00	0.014%	0.002275
3000063858	11/23/2021	12/29/2021	27,856.25	36.00	0.099%	0.035678
3000063859	11/23/2021	12/30/2021	100,000.00	37.00	0.356%	0.131637
3000063860	11/24/2021	12/6/2021	1,364.27	12.00	0.005%	0.000582
3000063861	11/24/2021	12/20/2021	1,500.00	26.00	0.005%	0.001388
3000063862	11/24/2021	12/3/2021	519.50	9.00	0.002%	0.000166
3000063863	11/24/2021	12/14/2021	100.00	20.00	0.000%	0.000071
3000063864	11/29/2021	12/17/2021	1,500.00	18.00	0.005%	0.000961
3000063865	11/29/2021	12/20/2021	1,500.00	21.00	0.005%	0.001121
3000063866	11/29/2021	12/7/2021	94.98	8.00	0.000%	0.000027
3000063867	11/30/2021	12/8/2021	768.87	8.00	0.003%	0.000219
3000063873	12/1/2021	12/20/2021	418.00	19.00	0.001%	0.000283
3000063874	12/2/2021	12/9/2021	3,330.18	7.00	0.012%	0.000829
3000063875	12/2/2021	12/9/2021	7.00	7.00	0.000%	0.000002
3000063876	12/2/2021	12/7/2021	100.00	5.00	0.000%	0.000018
3000063877	12/2/2021	12/7/2021	1,489.85	5.00	0.005%	0.000265
3000063878	12/2/2021	12/7/2021	542.50	5.00	0.002%	0.000097
3000063879	12/2/2021	12/8/2021	395.76	6.00	0.001%	0.000084
3000063880	12/2/2021	3/1/2022	50.00	89.00	0.000%	0.000158
3000063881	12/3/2021	12/14/2021	98.19	11.00	0.000%	0.000038
3000063882	12/3/2021	12/14/2021	2,576.19	11.00	0.009%	0.001008
3000063883	12/6/2021	12/16/2021	192.95	10.00	0.001%	0.000069
3000063884	12/6/2021	12/20/2021	31,115.70	14.00	0.111%	0.015498
3000063885	12/6/2021	12/15/2021	173.94	9.00	0.001%	0.000056
3000063886	12/7/2021	12/17/2021	94.02	10.00	0.000%	0.000033
3000063888	12/7/2021	12/15/2021	50.00	8.00	0.000%	0.000014
3000063889	12/7/2021	12/17/2021	100.00	10.00	0.000%	0.000036
3000063890	12/7/2021	12/17/2021	100.00	10.00	0.000%	0.000036
3000063891	12/7/2021	3/1/2022	50.00	84.00	0.000%	0.000149
3000063892	12/8/2021	12/21/2021	18,064.54	13.00	0.064%	0.008355
3000063893	12/8/2021	1/27/2022	384.00	50.00	0.001%	0.000683
3000063894	12/9/2021	12/20/2021	45,259.20	11.00	0.161%	0.017712
3000063895	12/9/2021	12/15/2021	7,276.75	6.00	0.026%	0.001553
3000063896	12/9/2021	1/7/2022	250,531.86	29.00	0.891%	0.258485
3000063897	12/10/2021	1/18/2022	14,900.00	39.00	0.053%	0.020674
3000063898	12/10/2021	12/20/2021	539.91	10.00	0.002%	0.000192
3000063899	12/10/2021	12/20/2021	16,116.29	10.00	0.057%	0.005734
3000063900	12/10/2021	1/7/2022	3,209.54	28.00	0.011%	0.003197
3000063901	12/10/2021	12/21/2021	1,885.83	11.00	0.007%	0.000738
3000063902	12/10/2021	12/22/2021	18,020.27	12.00	0.064%	0.007693
3000063903	12/10/2021	12/20/2021	8,012.66	10.00	0.029%	0.002851
3000063904	12/10/2021	12/28/2021	2,062.17	18.00	0.007%	0.001321
3000063905	12/10/2021	1/26/2022	50.00	47.00	0.000%	0.000084
3000063906	12/10/2021	1/10/2022	2,208.78	31.00	0.008%	0.002436

Check Number	Date	Reconciled	Amount	Unweighted Lead	Weighting Factor	Weighted Lead
3000063907	12/13/2021	12/23/2021	728.30	10.00	0.003%	0.000259
3000063908	12/13/2021	12/22/2021	3,717.04	9.00	0.013%	0.001190
3000063909	12/15/2021	1/5/2022	41.49	21.00	0.000%	0.000031
3000063910	12/15/2021	12/20/2021	2,444.71	5.00	0.009%	0.000435
3000063911	12/15/2021	12/31/2021	327.42	16.00	0.001%	0.000186
3000063912	12/15/2021	12/23/2021	200.00	8.00	0.001%	0.000057
3000063913	12/15/2021	12/22/2021	50.00	7.00	0.000%	0.000012
3000063914	12/16/2021	12/23/2021	11,872.23	7.00	0.042%	0.002957
3000063915	12/16/2021	1/5/2022	100.00	20.00	0.000%	0.000071
3000063916	12/17/2021	12/31/2021	2,861.92	14.00	0.010%	0.001425
3000063917	12/17/2021	1/3/2022	2,231.25	17.00	0.008%	0.001349
3000063918	12/17/2021	12/29/2021	5,933.40	12.00	0.021%	0.002533
3000063919	12/17/2021	12/24/2021	9,750.00	7.00	0.035%	0.002428
3000063920	12/17/2021	6/8/2022	7.00	173.00	0.000%	0.000043
3000063921	12/17/2021	12/22/2021	100.00	5.00	0.000%	0.000018
3000063922	12/17/2021	12/22/2021	1,489.85	5.00	0.005%	0.000265
3000063923	12/17/2021	12/23/2021	542.50	6.00	0.002%	0.000116
3000063924	12/17/2021	12/29/2021	419.53	12.00	0.001%	0.000179
3000063925	12/17/2021	1/25/2022	290.95	39.00	0.001%	0.000404
3000063926	12/17/2021	1/5/2022	20.00	19.00	0.000%	0.000014
3000063927	12/17/2021	12/30/2021	60.96	13.00	0.000%	0.000028
3000063928	12/20/2021	12/29/2021	219.62	9.00	0.001%	0.000070
3000063929	12/20/2021	12/29/2021	2,296.94	9.00	0.008%	0.000735
3000063930	12/21/2021	2/10/2022	60,000.00	51.00	0.213%	0.108867
3000063931	12/21/2021	12/28/2021	94.98	7.00	0.000%	0.000024
3000063932	12/21/2021	1/5/2022	25,000.00	15.00	0.089%	0.013342
3000063933	12/22/2021	1/3/2022	2,000.00	12.00	0.007%	0.000854
3000063934	12/22/2021	12/31/2021	1,095.92	9.00	0.004%	0.000351
3000063935	12/22/2021	1/4/2022	1,000.00	13.00	0.004%	0.000463
3000063936	12/22/2021	1/12/2022	4,284.56	21.00	0.015%	0.003201
3000063937	12/22/2021	1/5/2022	3,900.00	14.00	0.014%	0.001943
3000063938	12/28/2021	1/5/2022	2,533.00	8.00	0.009%	0.000721
3000063939	12/28/2021	1/12/2022	28,566.76	15.00	0.102%	0.015245
3000063940	12/30/2021	1/12/2022	714.00	13.00	0.003%	0.000330
3000063941	12/30/2021	1/11/2022	2,480.00	12.00	0.009%	0.001059
3000063942	12/30/2021	1/7/2022	30,347.87	8.00	0.108%	0.008638
3000063943	12/30/2021	1/7/2022	2,356.83	8.00	0.008%	0.000671
3000063944	12/30/2021	1/5/2022	1,489.85	6.00	0.005%	0.000318
3000063945	12/30/2021	1/6/2022	479.16	7.00	0.002%	0.000119
3000063946	12/30/2021	1/27/2022	5,200.00	28.00	0.019%	0.005180
3000063947	1/3/2022	2/11/2022	250.00	39.00	0.001%	0.000347
3000063948	1/3/2022	1/20/2022	27,550.00	17.00	0.098%	0.016663
3000063949	1/3/2022	1/13/2022	768.87	10.00	0.003%	0.000274
3000063950	1/4/2022	1/20/2022	750.00	16.00	0.003%	0.000427
3000063951	1/5/2022	1/20/2022	1,000.00	15.00	0.004%	0.000534
3000063952	1/5/2022	1/18/2022	572.10	13.00	0.002%	0.000265
3000063953	1/7/2022	1/19/2022	62,945.00	12.00	0.224%	0.026873
3000063954	1/7/2022	1/20/2022	9.72	13.00	0.000%	0.000004
3000063955	1/10/2022	1/24/2022	2,499.00	14.00	0.009%	0.001245
3000063956	1/10/2022	1/19/2022	1,200.00	9.00	0.004%	0.000384
3000063957	1/11/2022	1/20/2022	80.00	9.00	0.000%	0.000026
3000063958	1/11/2022	1/13/2022	3,000.00	2.00	0.011%	0.000213
3000063959	1/12/2022	1/24/2022	6,330.36	12.00	0.023%	0.002703
3000063960	1/12/2022	1/21/2022	20,293.87	9.00	0.072%	0.006498
3000063961	1/12/2022	1/26/2022	3,555.53	14.00	0.013%	0.001771
3000063962	1/12/2022	1/19/2022	3,255.08	7.00	0.012%	0.000811
3000063963	1/12/2022	1/21/2022	22,389.01	9.00	0.080%	0.007169
3000063964	1/12/2022	1/20/2022	6,360.85	8.00	0.023%	0.001810
3000063965	1/12/2022	1/24/2022	4,702.51	12.00	0.017%	0.002008
3000063966	1/12/2022	1/19/2022	11,348.75	7.00	0.040%	0.002826
3000063967	1/13/2022	1/26/2022	705.42	13.00	0.003%	0.000326
3000063968	1/13/2022	2/3/2022	40.98	21.00	0.000%	0.000031
3000063969	1/13/2022	1/27/2022	15,292.00	14.00	0.054%	0.007617
3000063970	1/13/2022	1/24/2022	7.00	11.00	0.000%	0.000003
3000063971	1/13/2022	1/20/2022	100.00	7.00	0.000%	0.000025

Check Number	Date	Reconciled	Amount	Unweighted Lead	Weighting Factor	Weighted Lead
3000063972	1/13/2022	1/21/2022	1,489.85	8.00	0.005%	0.000424
3000063973	1/13/2022	1/20/2022	542.50	7.00	0.002%	0.000135
3000063974	1/13/2022	1/20/2022	480.16	7.00	0.002%	0.000120
3000063976	1/14/2022	1/24/2022	11,872.23	10.00	0.042%	0.004224
3000063977	1/14/2022	1/24/2022	5,742.00	10.00	0.020%	0.002043
3000063978	1/14/2022	1/24/2022	67.89	10.00	0.000%	0.000024
3000063979	1/17/2022	1/25/2022	4,408,803.13	8.00	15.685%	1.254833
3000063980	1/17/2022	2/1/2022	200.00	15.00	0.001%	0.000107
3000063981	1/18/2022	1/31/2022	800.00	13.00	0.003%	0.000370
3000063982	1/18/2022	2/16/2022	179.70	29.00	0.001%	0.000185
3000063983	1/18/2022	2/25/2022	614.26	38.00	0.002%	0.000830
3000063984	1/18/2022	5/16/2022	6,830.31	118.00	0.024%	0.028675
3000063985	1/20/2022	1/31/2022	2,662.26	11.00	0.009%	0.001042
3000063986	1/20/2022	1/31/2022	275,619.07	11.00	0.981%	0.107864
3000063987	1/20/2022	2/1/2022	166,012.19	12.00	0.591%	0.070876
3000063988	1/20/2022	1/27/2022	36,979.49	7.00	0.132%	0.009209
3000063989	1/21/2022	2/7/2022	185.81	17.00	0.001%	0.000112
3000063990	1/21/2022	2/2/2022	98.35	12.00	0.000%	0.000042
3000063991	1/21/2022	1/31/2022	974.35	10.00	0.003%	0.000347
3000063992	1/24/2022	2/8/2022	4,357.00	15.00	0.016%	0.002325
3000063993	1/25/2022	2/7/2022	1,095.92	13.00	0.004%	0.000507
3000063994	1/25/2022	3/31/2022	100.00	65.00	0.000%	0.000231
3000063995	1/26/2022	2/2/2022	762.07	7.00	0.003%	0.000190
3000063997	1/27/2022	2/2/2022	7.00	6.00	0.000%	0.000001
3000063998	1/27/2022	2/7/2022	1,489.85	11.00	0.005%	0.000583
3000063999	1/27/2022	2/2/2022	542.50	6.00	0.002%	0.000116
3000064000	1/27/2022	2/9/2022	632.66	13.00	0.002%	0.000293
3000064001	1/28/2022	2/18/2022	14,843.55	21.00	0.053%	0.011090
3000064002	1/28/2022	2/4/2022	10,230.00	7.00	0.036%	0.002548
3000064003	1/28/2022	2/10/2022	4,999.00	13.00	0.018%	0.002312
3000064004	1/31/2022	2/11/2022	4,063.20	11.00	0.014%	0.001590
3000064005	1/31/2022	2/18/2022	1,000.00	18.00	0.004%	0.000640
3000064007	1/31/2022	2/23/2022	92.40	23.00	0.000%	0.000076
3000064008	2/1/2022	2/10/2022	193.00	9.00	0.001%	0.000062
3000064009	2/1/2022	2/7/2022	90,165.00	6.00	0.321%	0.019247
3000064010	2/1/2022	2/10/2022	17,660.00	9.00	0.063%	0.005655
3000064011	2/2/2022	2/14/2022	591.39	12.00	0.002%	0.000252
3000064012	2/4/2022	2/18/2022	108.11	14.00	0.000%	0.000054
3000064013	2/4/2022	2/23/2022	452.51	19.00	0.002%	0.000306
3000064014	2/4/2022	2/16/2022	362.00	12.00	0.001%	0.000155
3000064015	2/7/2022	2/16/2022	150.00	9.00	0.001%	0.000048
3000064016	2/8/2022	2/16/2022	92.45	8.00	0.000%	0.000026
3000064017	2/8/2022	2/24/2022	1,092.63	16.00	0.004%	0.000622
3000064018	2/8/2022	2/17/2022	112.95	9.00	0.000%	0.000036
3000064019	2/8/2022	2/22/2022	2,405.00	14.00	0.009%	0.001198
3000064020	2/9/2022	2/17/2022	4.52	8.00	0.000%	0.000001
3000064022	2/10/2022	2/17/2022	705.42	7.00	0.003%	0.000176
3000064023	2/10/2022	2/18/2022	350.00	8.00	0.001%	0.000100
3000064024	2/10/2022	2/18/2022	7.00	8.00	0.000%	0.000002
3000064025	2/10/2022	2/15/2022	1,489.85	5.00	0.005%	0.000265
3000064026	2/10/2022	2/15/2022	542.50	5.00	0.002%	0.000097
3000064027	2/10/2022	2/17/2022	392.59	7.00	0.001%	0.000098
3000064028	2/10/2022	6/3/2022	250.00	113.00	0.001%	0.001005
3000064029	2/11/2022	2/22/2022	5,443.10	11.00	0.019%	0.002130
3000064030	2/11/2022	2/22/2022	23,596.41	11.00	0.084%	0.009235
3000064031	2/11/2022	2/23/2022	4,946.70	12.00	0.018%	0.002112
3000064032	2/11/2022	2/22/2022	3,919.81	11.00	0.014%	0.001534
3000064033	2/11/2022	2/23/2022	25,627.31	12.00	0.091%	0.010941
3000064034	2/11/2022	2/22/2022	12,762.55	11.00	0.045%	0.004995
3000064035	2/14/2022	3/7/2022	40.98	21.00	0.000%	0.000031
3000064036	2/15/2022	2/22/2022	9,665.44	7.00	0.034%	0.002407
3000064037	2/15/2022	2/18/2022	6,000.00	3.00	0.021%	0.000640
3000064038	2/16/2022	3/9/2022	100.00	21.00	0.000%	0.000075
3000064039	2/16/2022	3/1/2022	300.00	13.00	0.001%	0.000139
3000064040	2/16/2022	3/1/2022	50.00	13.00	0.000%	0.000023

Check Number	Date	Reconciled	Amount	Unweighted Lead	Weighting Factor	Weighted Lead
3000064041	2/16/2022	3/1/2022	150.00	13.00	0.001%	0.000069
3000064042	2/16/2022	3/1/2022	200.00	13.00	0.001%	0.000093
3000064043	2/16/2022	3/3/2022	300.00	15.00	0.001%	0.000160
3000064044	2/16/2022	3/1/2022	350.00	13.00	0.001%	0.000162
3000064045	2/17/2022	2/24/2022	10,431.14	7.00	0.037%	0.002598
3000064046	2/17/2022	2/24/2022	5,933.40	7.00	0.021%	0.001478
3000064048	2/18/2022	2/23/2022	442.34	5.00	0.002%	0.000079
3000064049	2/18/2022	2/28/2022	659.25	10.00	0.002%	0.000235
3000064050	2/18/2022	2/28/2022	3,322.16	10.00	0.012%	0.001182
3000064051	2/21/2022	3/9/2022	3,200.00	16.00	0.011%	0.001822
3000064052	2/21/2022	3/7/2022	200.00	14.00	0.001%	0.000100
3000064053	2/21/2022	3/21/2022	14,831.25	28.00	0.053%	0.014774
3000064054	2/21/2022	3/2/2022	1,500.00	9.00	0.005%	0.000480
3000064055	2/22/2022	3/1/2022	47.49	7.00	0.000%	0.000012
3000064056	2/22/2022	3/2/2022	583.75	8.00	0.002%	0.000166
3000064057	2/22/2022	3/14/2022	5,000.00	20.00	0.018%	0.003558
3000064058	2/23/2022	3/4/2022	10,000.00	9.00	0.036%	0.003202
3000064059	2/23/2022	3/3/2022	357.00	8.00	0.001%	0.000102
3000064060	2/23/2022	3/29/2022	5,000.00	34.00	0.018%	0.006048
3000064061	2/23/2022	3/3/2022	1,095.97	8.00	0.004%	0.000312
3000064062	2/23/2022	3/3/2022	125.60	8.00	0.000%	0.000036
3000064063	2/24/2022	3/9/2022	690.01	13.00	0.002%	0.000319
3000064064	2/24/2022	3/3/2022	7.00	7.00	0.000%	0.000002
3000064065	2/24/2022	3/1/2022	1,489.85	5.00	0.005%	0.000265
3000064066	2/24/2022	3/1/2022	542.50	5.00	0.002%	0.000097
3000064067	2/24/2022	3/2/2022	1,071.26	6.00	0.004%	0.000229
3000064068	2/24/2022	3/2/2022	46,000.00	6.00	0.164%	0.009819
3000064069	2/25/2022	3/8/2022	762.07	11.00	0.003%	0.000298
3000064070	2/25/2022	3/7/2022	620.00	10.00	0.002%	0.000221
3000064071	2/25/2022	3/10/2022	2,916.08	13.00	0.010%	0.001349
3000064072	2/28/2022	3/8/2022	3,493.03	8.00	0.012%	0.000994
3000064073	3/1/2022	3/8/2022	4,324.32	7.00	0.015%	0.001077
3000064074	3/1/2022	3/8/2022	274.53	7.00	0.001%	0.000068
3000064075	3/3/2022	3/14/2022	87.76	11.00	0.000%	0.000034
3000064076	3/3/2022	3/11/2022	98.27	8.00	0.000%	0.000028
3000064077	3/3/2022	3/14/2022	7,518.39	11.00	0.027%	0.002942
3000064078	3/3/2022	3/14/2022	2,824.00	11.00	0.010%	0.001105
3000064079	3/4/2022	3/16/2022	3,315.06	12.00	0.012%	0.001415
3000064080	3/4/2022	3/14/2022	2,130.00	10.00	0.008%	0.000758
3000064081	3/4/2022	3/14/2022	5,660.00	10.00	0.020%	0.002014
3000064082	3/4/2022	3/14/2022	20.00	10.00	0.000%	0.000007
3000064083	3/4/2022	3/14/2022	4,245.96	10.00	0.015%	0.001511
3000064084	3/4/2022	3/31/2022	685.41	27.00	0.002%	0.000658
3000064085	3/7/2022	3/14/2022	4,455.62	7.00	0.016%	0.001110
3000064086	3/7/2022	3/14/2022	6,800.00	7.00	0.024%	0.001693
3000064087	3/7/2022	3/31/2022	1,016.22	24.00	0.004%	0.000868
3000064088	3/9/2022	3/21/2022	1,755.60	12.00	0.006%	0.000750
3000064089	3/9/2022	3/16/2022	200.00	7.00	0.001%	0.000050
3000064090	3/9/2022	3/17/2022	52,369.22	8.00	0.186%	0.014905
3000064091	3/9/2022	3/16/2022	10,000.00	7.00	0.036%	0.002490
3000064092	3/9/2022	4/12/2022	520.00	34.00	0.002%	0.000629
3000064093	3/9/2022	3/31/2022	2,426.48	22.00	0.009%	0.001899
3000064094	3/10/2022	3/22/2022	7.00	12.00	0.000%	0.000003
3000064095	3/10/2022	3/29/2022	1,489.85	19.00	0.005%	0.001007
3000064097	3/10/2022	3/16/2022	602.57	6.00	0.002%	0.000129
3000064098	3/11/2022	3/18/2022	3,185.08	7.00	0.011%	0.000793
3000064099	3/11/2022	3/22/2022	928.00	11.00	0.003%	0.000363
3000064100	3/11/2022	3/22/2022	21,508.05	11.00	0.077%	0.008417
3000064101	3/11/2022	3/29/2022	4,140.64	18.00	0.015%	0.002652
3000064102	3/11/2022	3/24/2022	3,962.10	13.00	0.014%	0.001832
3000064103	3/11/2022	3/22/2022	20,229.93	11.00	0.072%	0.007917
3000064104	3/11/2022	3/21/2022	1,351.04	10.00	0.005%	0.000481
3000064105	3/11/2022	3/18/2022	12,064.76	7.00	0.043%	0.003005
3000064106	3/14/2022	3/18/2022	2,550.00	4.00	0.009%	0.000363
3000064107	3/14/2022	3/28/2022	7,500.00	14.00	0.027%	0.003736

Check Number	Date	Reconciled	Amount	Unweighted Lead	Weighting Factor	Weighted Lead
3000064108	3/15/2022	3/22/2022	47.49	7.00	0.000%	0.000012
3000064110	3/15/2022	5/20/2022	275,000.00	66.00	0.978%	0.645731
3000064111	3/16/2022	3/23/2022	792.54	7.00	0.003%	0.000197
3000064112	3/16/2022	3/28/2022	40.98	12.00	0.000%	0.000017
3000064113	3/18/2022	3/29/2022	131.76	11.00	0.000%	0.000052
3000064114	3/18/2022	3/28/2022	1,457.40	10.00	0.005%	0.000519
3000064115	3/18/2022	3/24/2022	11,872.23	6.00	0.042%	0.002534
3000064117	3/18/2022	3/30/2022	2,851.38	12.00	0.010%	0.001217
3000064118	3/18/2022	4/28/2022	1,375.00	41.00	0.005%	0.002006
3000064119	3/18/2022	4/12/2022	377.10	25.00	0.001%	0.000335
3000064120	3/18/2022	4/5/2022	9,286.52	18.00	0.033%	0.005947
3000064121	3/21/2022	4/5/2022	300.00	15.00	0.001%	0.000160
3000064122	3/21/2022	4/21/2022	500.00	31.00	0.002%	0.000551
3000064123	3/21/2022	4/27/2022	500.00	37.00	0.002%	0.000658
3000064124	3/21/2022	5/3/2022	500.00	43.00	0.002%	0.000765
3000064125	3/22/2022	4/5/2022	147.22	14.00	0.001%	0.000073
3000064126	3/22/2022	3/31/2022	450.00	9.00	0.002%	0.000144
3000064127	3/23/2022	4/6/2022	762.07	14.00	0.003%	0.000380
3000064128	3/24/2022	4/4/2022	1,095.93	11.00	0.004%	0.000429
3000064129	3/24/2022	4/1/2022	571.15	8.00	0.002%	0.000163
3000064130	3/25/2022	4/6/2022	248.86	12.00	0.001%	0.000106
3000064131	3/25/2022	4/6/2022	2,750.00	12.00	0.010%	0.001174
3000064132	3/25/2022	4/4/2022	1,019.62	10.00	0.004%	0.000363
3000064133	3/25/2022	4/1/2022	4,231.57	7.00	0.015%	0.001054
3000064134	3/25/2022	5/18/2022	250.00	54.00	0.001%	0.000480
3000064135	3/25/2022	3/31/2022	7.00	6.00	0.000%	0.000001
3000064136	3/25/2022	3/30/2022	1,489.85	5.00	0.005%	0.000265
3000064137	3/25/2022	3/30/2022	542.50	5.00	0.002%	0.000097
3000064138	3/25/2022	3/31/2022	1,006.03	6.00	0.004%	0.000215
3000064139	3/25/2022	5/9/2022	1,000.00	45.00	0.004%	0.001601
3000064140	3/25/2022	4/5/2022	50.00	11.00	0.000%	0.000020
3000064141	3/25/2022	4/5/2022	50.00	11.00	0.000%	0.000020
3000064142	3/25/2022	4/13/2022	100.00	19.00	0.000%	0.000068
3000064143	3/25/2022	9/27/2022	500.00	186.00	0.002%	0.003309
3000064144	3/25/2022	4/13/2022	150.00	19.00	0.001%	0.000101
3000064145	3/25/2022	4/6/2022	200.00	12.00	0.001%	0.000085
3000064146	3/25/2022	4/7/2022	400.00	13.00	0.001%	0.000185
3000064147	3/25/2022	4/7/2022	2,250.00	13.00	0.008%	0.001041
3000064148	3/25/2022	4/12/2022	600.00	18.00	0.002%	0.000384
3000064149	3/25/2022	4/13/2022	500.00	19.00	0.002%	0.000338
3000064150	3/25/2022	4/5/2022	300.00	11.00	0.001%	0.000117
3000064151	3/28/2022	4/4/2022	10,230.00	7.00	0.036%	0.002548
3000064152	3/28/2022	4/7/2022	1,355.16	10.00	0.005%	0.000482
3000064153	3/28/2022	4/4/2022	313,539.26	7.00	1.115%	0.078085
3000064154	3/28/2022	4/4/2022	10,391.73	7.00	0.037%	0.002588
3000064155	3/28/2022	4/1/2022	9.71	4.00	0.000%	0.000001
3000064156	3/28/2022	4/4/2022	7,570.91	7.00	0.027%	0.001885
3000064157	3/28/2022	4/7/2022	25,591.02	10.00	0.091%	0.009105
3000064158	3/28/2022	4/4/2022	9,785.89	7.00	0.035%	0.002437
3000064159	3/28/2022	4/8/2022	10,457.63	11.00	0.037%	0.004093
3000064160	3/28/2022	4/12/2022	100.00	15.00	0.000%	0.000053
3000064161	3/28/2022	4/8/2022	9,811.38	11.00	0.035%	0.003840
3000064162	3/28/2022	4/8/2022	615,211.26	11.00	2.189%	0.240764
3000064163	3/28/2022	4/4/2022	218.56	7.00	0.001%	0.000054
3000064164	3/28/2022	4/5/2022	102,486.81	8.00	0.365%	0.029170
3000064165	3/28/2022	4/12/2022	2,478.75	15.00	0.009%	0.001323
3000064166	3/28/2022	4/6/2022	1,007,995.87	9.00	3.586%	0.322758
3000064167	3/28/2022	4/5/2022	10,776.16	8.00	0.038%	0.003067
3000064168	3/28/2022	4/5/2022	262,442.46	8.00	0.934%	0.074696
3000064169	3/28/2022	4/6/2022	10,834.51	9.00	0.039%	0.003469
3000064170	3/28/2022	4/7/2022	1,011,673.65	10.00	3.599%	0.359928
3000064171	3/28/2022	4/4/2022	43,382.84	7.00	0.154%	0.010804
3000064172	3/28/2022	4/7/2022	646,121.76	10.00	2.299%	0.229874
3000064173	3/28/2022	4/6/2022	13,878.05	9.00	0.049%	0.004444
3000064174	3/28/2022	4/5/2022	743,281.26	8.00	2.644%	0.211553

Check Number	Date	Reconciled	Amount	Unweighted Lead	Weighting Factor	Weighted Lead
3000064175	3/28/2022	4/5/2022	458,263.34	8.00	1.630%	0.130431
3000064176	3/28/2022	4/5/2022	124,825.49	8.00	0.444%	0.035528
3000064177	3/28/2022	4/11/2022	196,020.36	14.00	0.697%	0.097635
3000064178	3/28/2022	4/4/2022	85,965.78	7.00	0.306%	0.021409
3000064179	3/28/2022	4/4/2022	57,490.43	7.00	0.205%	0.014318
3000064180	3/28/2022	4/5/2022	37,501.37	8.00	0.133%	0.010674
3000064181	3/28/2022	4/4/2022	33,070.56	7.00	0.118%	0.008236
3000064182	3/28/2022	4/5/2022	50,334.58	8.00	0.179%	0.014326
3000064183	3/28/2022	4/5/2022	47,978.29	8.00	0.171%	0.013656
3000064184	3/28/2022	4/4/2022	3,437.98	7.00	0.012%	0.000856
3000064185	3/28/2022	4/6/2022	20,235.42	9.00	0.072%	0.006479
3000064186	3/28/2022	4/8/2022	90,133.84	11.00	0.321%	0.035274
3000064187	3/28/2022	4/5/2022	17,423.02	8.00	0.062%	0.004959
3000064188	3/28/2022	4/14/2022	3,687.39	17.00	0.013%	0.002230
3000064189	3/28/2022	4/8/2022	914.69	11.00	0.003%	0.000358
3000064190	3/28/2022	4/6/2022	4,524.00	9.00	0.016%	0.001449
3000064191	3/28/2022	4/1/2022	2,546.27	4.00	0.009%	0.000362
3000064192	3/28/2022	4/1/2022	513.77	4.00	0.002%	0.000073
3000064193	3/28/2022	4/6/2022	51,901.58	9.00	0.185%	0.016619
3000064194	3/28/2022	5/9/2022	750.00	42.00	0.003%	0.001121
3000064196	3/28/2022	4/6/2022	1,802.52	9.00	0.006%	0.000577
3000064197	3/28/2022	5/16/2022	2,426.26	49.00	0.009%	0.004230
3000064198	3/28/2022	4/15/2022	167.60	18.00	0.001%	0.000107
3000064199	3/29/2022	4/7/2022	13,260.63	9.00	0.047%	0.004246
3000064200	3/29/2022	4/13/2022	500.00	15.00	0.002%	0.000267
3000064201	3/29/2022	4/18/2022	42.70	20.00	0.000%	0.000030
3000064202	3/30/2022	4/11/2022	10,395.00	12.00	0.037%	0.004438
3000064203	3/31/2022	4/13/2022	32.90	13.00	0.000%	0.000015
3000064204	3/31/2022	4/6/2022	41.05	6.00	0.000%	0.000009
3000064206	4/1/2022	4/11/2022	304.76	10.00	0.001%	0.000108
3000064207	4/1/2022	4/11/2022	1,048.00	10.00	0.004%	0.000373
3000064208	4/1/2022	4/20/2022	6,326.02	19.00	0.023%	0.004276
3000064209	4/1/2022	5/3/2022	500.00	32.00	0.002%	0.000569
3000064210	4/1/2022	4/22/2022	500.00	21.00	0.002%	0.000374
3000064211	4/1/2022	4/25/2022	500.00	24.00	0.002%	0.000427
3000064212	4/1/2022	4/11/2022	943.97	10.00	0.003%	0.000336
3000064213	4/4/2022	4/11/2022	596.57	7.00	0.002%	0.000149
3000064214	4/4/2022	5/27/2022	750.00	53.00	0.003%	0.001414
3000064215	4/5/2022	4/12/2022	98.50	7.00	0.000%	0.000025
3000064216	4/6/2022	4/13/2022	10,000.00	7.00	0.036%	0.002490
3000064217	4/7/2022	4/19/2022	4,357.00	12.00	0.016%	0.001860
3000064218	4/7/2022	4/14/2022	7.00	7.00	0.000%	0.000002
3000064219	4/7/2022	4/13/2022	1,489.85	6.00	0.005%	0.000318
3000064220	4/7/2022	4/13/2022	542.50	6.00	0.002%	0.000116
3000064221	4/7/2022	4/13/2022	0.40	6.00	0.000%	0.000000
3000064222	4/7/2022	4/12/2022	250.00	5.00	0.001%	0.000044
3000064223	4/8/2022	4/25/2022	3,250.00	17.00	0.012%	0.001966
3000064224	4/8/2022	4/19/2022	5,933.40	11.00	0.021%	0.002322
3000064225	4/8/2022	4/14/2022	2,050.00	6.00	0.007%	0.000438
3000064226	4/8/2022	4/29/2022	3,285.41	21.00	0.012%	0.002455
3000064227	4/11/2022	4/19/2022	574.52	8.00	0.002%	0.000164
3000064228	4/11/2022	4/21/2022	87.40	10.00	0.000%	0.000031
3000064229	4/11/2022	4/20/2022	77,110.00	9.00	0.274%	0.024690
3000064230	4/11/2022	4/20/2022	4,100.00	9.00	0.015%	0.001313
3000064231	4/12/2022	4/25/2022	300.00	13.00	0.001%	0.000139
3000064232	4/12/2022	4/20/2022	18,261.46	8.00	0.065%	0.005198
3000064233	4/12/2022	4/20/2022	3,723.70	8.00	0.013%	0.001060
3000064234	4/12/2022	5/23/2022	8,763.80	41.00	0.031%	0.012784
3000064235	4/12/2022	4/22/2022	1,206.72	10.00	0.004%	0.000429
3000064236	4/12/2022	4/25/2022	7,835.38	13.00	0.028%	0.003624
3000064237	4/12/2022	4/22/2022	3,267.14	10.00	0.012%	0.001162
3000064238	4/12/2022	4/20/2022	18,097.19	8.00	0.064%	0.005151
3000064240	4/12/2022	4/19/2022	10,059.33	7.00	0.036%	0.002505
3000064241	4/13/2022	4/20/2022	20,000.00	7.00	0.071%	0.004981
3000064243	4/13/2022	4/18/2022	30,000.00	5.00	0.107%	0.005337

Check Number	Date	Reconciled	Amount	Unweighted Lead	Weighting Factor	Weighted Lead
3000064244	4/13/2022	4/25/2022	50.00	12.00	0.000%	0.000021
3000064245	4/14/2022	4/19/2022	4,249.75	5.00	0.015%	0.000756
3000064246	4/14/2022	4/22/2022	650.00	8.00	0.002%	0.000185
3000064247	4/14/2022	4/19/2022	11,872.23	5.00	0.042%	0.002112
3000064248	4/14/2022	4/21/2022	5,359.20	7.00	0.019%	0.001335
3000064249	4/14/2022	4/20/2022	10,000.00	6.00	0.036%	0.002135
3000064250	4/18/2022	4/29/2022	1,060.00	11.00	0.004%	0.000415
3000064251	4/18/2022	4/25/2022	3,844.00	7.00	0.014%	0.000957
3000064252	4/18/2022	4/25/2022	2,321.11	7.00	0.008%	0.000578
3000064253	4/19/2022	4/28/2022	19,467.36	9.00	0.069%	0.006233
3000064254	4/19/2022	5/11/2022	499.78	22.00	0.002%	0.000391
3000064255	4/20/2022	4/27/2022	705.42	7.00	0.003%	0.000176
3000064256	4/20/2022	4/27/2022	759.40	7.00	0.003%	0.000189
3000064257	4/20/2022	4/25/2022	40,211.00	5.00	0.143%	0.007153
3000064258	4/20/2022	4/25/2022	11,215.95	5.00	0.040%	0.001995
3000064259	4/20/2022	4/27/2022	2,180.84	7.00	0.008%	0.000543
3000064260	4/20/2022	4/27/2022	286,539.42	7.00	1.019%	0.071360
3000064261	4/20/2022	4/28/2022	190,504.93	8.00	0.678%	0.054221
3000064262	4/20/2022	4/26/2022	43,897.68	6.00	0.156%	0.009371
3000064263	4/21/2022	4/27/2022	357.00	6.00	0.001%	0.000076
3000064264	4/21/2022	4/25/2022	1,667.79	4.00	0.006%	0.000237
3000064265	4/21/2022	4/29/2022	7,276.75	8.00	0.026%	0.002071
3000064266	4/21/2022	4/27/2022	7.00	6.00	0.000%	0.000001
3000064267	4/21/2022	5/5/2022	1,489.85	14.00	0.005%	0.000742
3000064268	4/21/2022	4/26/2022	542.50	5.00	0.002%	0.000097
3000064269	4/21/2022	10/3/2022	1,411.15	165.00	0.005%	0.008284
3000064270	4/21/2022	6/9/2022	2,822.42	49.00	0.010%	0.004920
3000064271	4/22/2022	5/2/2022	24,000.00	10.00	0.085%	0.008539
3000064272	4/22/2022	4/29/2022	51,662.47	7.00	0.184%	0.012866
3000064273	4/22/2022	4/27/2022	7,802.69	5.00	0.028%	0.001388
3000064274	4/22/2022	4/28/2022	14,881.69	6.00	0.053%	0.003177
3000064275	4/22/2022	4/27/2022	665,139.93	5.00	2.366%	0.118320
3000064277	4/22/2022	5/13/2022	957.72	21.00	0.003%	0.000716
3000064278	4/22/2022	5/4/2022	3,549.76	12.00	0.013%	0.001515
3000064279	4/22/2022	5/23/2022	1,000.00	31.00	0.004%	0.001103
3000064280	4/25/2022	5/2/2022	1,000.00	7.00	0.004%	0.000249
3000064281	4/25/2022	5/2/2022	6,008.30	7.00	0.021%	0.001496
3000064282	4/25/2022	5/19/2022	240.76	24.00	0.001%	0.000206
3000064283	4/26/2022	5/3/2022	47.49	7.00	0.000%	0.000012
3000064284	4/26/2022	5/3/2022	1,095.93	7.00	0.004%	0.000273
3000064285	4/26/2022	5/11/2022	8,200.00	15.00	0.029%	0.004376
3000064286	4/27/2022	5/2/2022	3,110.50	5.00	0.011%	0.000553
3000064287	4/28/2022	5/10/2022	500.00	12.00	0.002%	0.000213
3000064288	4/29/2022	5/12/2022	875.00	13.00	0.003%	0.000405
3000064289	4/29/2022	5/6/2022	20.00	7.00	0.000%	0.000005
3000064290	4/29/2022	5/11/2022	78,000.00	12.00	0.278%	0.033301
3000064291	4/29/2022	5/13/2022	4,958.90	14.00	0.018%	0.002470
3000064292	4/29/2022	5/11/2022	244.54	12.00	0.001%	0.000104
3000064293	5/2/2022	5/12/2022	5,000.00	10.00	0.018%	0.001779
3000064294	5/2/2022	5/13/2022	113.00	11.00	0.000%	0.000044
3000064295	5/2/2022	5/13/2022	46,312.25	11.00	0.165%	0.018124
3000064296	5/3/2022	5/19/2022	250.00	16.00	0.001%	0.000142
3000064297	5/3/2022	5/26/2022	500.00	23.00	0.002%	0.000409
3000064298	5/4/2022	5/20/2022	2,500.00	16.00	0.009%	0.001423
3000064299	5/5/2022	5/13/2022	1,866.06	8.00	0.007%	0.000531
3000064300	5/5/2022	5/13/2022	98.42	8.00	0.000%	0.000028
3000064301	5/5/2022	5/11/2022	7.00	6.00	0.000%	0.000001
3000064302	5/5/2022	5/17/2022	370.75	12.00	0.001%	0.000158
3000064303	5/5/2022	5/10/2022	1,489.85	5.00	0.005%	0.000265
3000064304	5/5/2022	5/10/2022	542.50	5.00	0.002%	0.000097
3000064305	5/5/2022	5/11/2022	142.15	6.00	0.001%	0.000030
3000064306	5/5/2022	7/22/2022	35,000.00	78.00	0.125%	0.097127
3000064307	5/6/2022	5/13/2022	91.83	7.00	0.000%	0.000023
3000064308	5/6/2022	5/26/2022	2,600.00	20.00	0.009%	0.001850
3000064309	5/6/2022	5/12/2022	8,100.00	6.00	0.029%	0.001729

Check Number	Date	Reconciled	Amount	Unweighted Lead	Weighting Factor	Weighted Lead
3000064310	5/6/2022	5/12/2022	1,210.89	6.00	0.004%	0.000258
3000064311	5/6/2022	5/17/2022	65,130.00	11.00	0.232%	0.025489
3000064312	5/6/2022	5/23/2022	30.00	17.00	0.000%	0.000018
3000064314	5/9/2022	5/17/2022	988.47	8.00	0.004%	0.000281
3000064315	5/9/2022	5/12/2022	11,563.77	3.00	0.041%	0.001234
3000064316	5/11/2022	5/26/2022	4,650.00	15.00	0.017%	0.002482
3000064317	5/12/2022	5/26/2022	4,650.00	14.00	0.017%	0.002316
3000064318	5/12/2022	5/27/2022	1,234.41	15.00	0.004%	0.000659
3000064319	5/12/2022	5/19/2022	18,638.56	7.00	0.066%	0.004642
3000064320	5/12/2022	5/23/2022	3,421.58	11.00	0.012%	0.001339
3000064321	5/12/2022	5/23/2022	2,871.35	11.00	0.010%	0.001124
3000064322	5/12/2022	5/20/2022	17,791.27	8.00	0.063%	0.005064
3000064323	5/12/2022	5/24/2022	1,815.71	12.00	0.006%	0.000775
3000064324	5/12/2022	5/23/2022	9,861.65	11.00	0.035%	0.003859
3000064325	5/13/2022	5/25/2022	4,350.00	12.00	0.015%	0.001857
3000064326	5/13/2022	5/19/2022	5,933.40	6.00	0.021%	0.001267
3000064327	5/13/2022	5/24/2022	4,100.00	11.00	0.015%	0.001605
3000064328	5/13/2022	5/24/2022	50.00	11.00	0.000%	0.000020
3000064329	5/13/2022	5/24/2022	50.00	11.00	0.000%	0.000020
3000064330	5/13/2022	6/1/2022	1,754.40	19.00	0.006%	0.001186
3000064331	5/16/2022	6/6/2022	1,750.00	21.00	0.006%	0.001307
3000064332	5/16/2022	5/20/2022	1,369.09	4.00	0.005%	0.000195
3000064333	5/16/2022	5/24/2022	10,000.00	8.00	0.036%	0.002846
3000064334	5/16/2022	5/27/2022	7,800.00	11.00	0.028%	0.003053
3000064335	5/17/2022	5/24/2022	5,563.13	7.00	0.020%	0.001385
3000064336	5/17/2022	5/26/2022	112.95	9.00	0.000%	0.000036
3000064337	5/17/2022	6/2/2022	51.08	16.00	0.000%	0.000029
3000064338	5/18/2022	8/15/2022	188.00	89.00	0.001%	0.000595
3000064339	5/19/2022	5/25/2022	6,916.14	6.00	0.025%	0.001476
3000064340	5/19/2022	6/1/2022	1,560.00	13.00	0.006%	0.000722
3000064341	5/19/2022	5/27/2022	7.00	8.00	0.000%	0.000002
3000064342	5/19/2022	5/27/2022	370.75	8.00	0.001%	0.000106
3000064343	5/19/2022	5/24/2022	1,489.85	5.00	0.005%	0.000265
3000064344	5/19/2022	6/10/2022	542.50	22.00	0.002%	0.000425
3000064345	5/19/2022	5/26/2022	290.15	7.00	0.001%	0.000072
3000064346	5/19/2022	5/25/2022	2,061.52	6.00	0.007%	0.000440
3000064348	5/20/2022	5/31/2022	3,283.91	11.00	0.012%	0.001285
3000064349	5/20/2022	6/1/2022	4,314.00	12.00	0.015%	0.001842
3000064350	5/20/2022	5/25/2022	7,158.06	5.00	0.025%	0.001273
3000064351	5/20/2022	6/10/2022	2,742.00	21.00	0.010%	0.002049
3000064352	5/20/2022	5/25/2022	2,352.31	5.00	0.008%	0.000418
3000064353	5/23/2022	6/3/2022	32,577.91	11.00	0.116%	0.012749
3000064354	5/23/2022	5/31/2022	1,095.93	8.00	0.004%	0.000312
3000064355	5/23/2022	6/1/2022	9,000.00	9.00	0.032%	0.002882
3000064356	5/23/2022	6/6/2022	660.00	14.00	0.002%	0.000329
3000064357	5/24/2022	6/1/2022	94.98	8.00	0.000%	0.000027
3000064358	5/24/2022	6/14/2022	13,257.52	21.00	0.047%	0.009905
3000064359	5/24/2022	6/6/2022	450.00	13.00	0.002%	0.000208
3000064360	5/25/2022	6/3/2022	200.00	9.00	0.001%	0.000064
3000064361	5/25/2022	6/2/2022	383,997.71	8.00	1.366%	0.109293
3000064362	5/25/2022	6/6/2022	196,597.52	12.00	0.699%	0.083933
3000064363	5/26/2022	6/10/2022	500.00	15.00	0.002%	0.000267
3000064364	5/26/2022	6/10/2022	6,169.24	15.00	0.022%	0.003292
3000064365	5/26/2022	6/15/2022	174.46	20.00	0.001%	0.000124
3000064366	5/27/2022	6/8/2022	339.20	12.00	0.001%	0.000145
3000064367	5/27/2022	6/10/2022	498.00	14.00	0.002%	0.000248
3000064369	5/27/2022	6/2/2022	3,854.79	6.00	0.014%	0.000823
3000064370	5/31/2022	6/28/2022	153.00	28.00	0.001%	0.000152
3000064371	5/31/2022	6/15/2022	50.00	15.00	0.000%	0.000027
3000064372	5/31/2022	6/15/2022	50.00	15.00	0.000%	0.000027
3000064373	5/31/2022	6/15/2022	100.00	15.00	0.000%	0.000053
3000064374	5/31/2022	6/16/2022	50.00	16.00	0.000%	0.000028
3000064375	5/31/2022	6/27/2022	200.00	27.00	0.001%	0.000192
3000064376	5/31/2022	6/14/2022	50.00	14.00	0.000%	0.000025
3000064377	5/31/2022	6/15/2022	50.00	15.00	0.000%	0.000027

Check Number	Date	Reconciled	Amount	Unweighted Lead	Weighting Factor	Weighted Lead
3000064378	5/31/2022	6/17/2022	200.00	17.00	0.001%	0.000121
3000064379	5/31/2022	6/28/2022	750.00	28.00	0.003%	0.000747
3000064380	5/31/2022	6/15/2022	500.00	15.00	0.002%	0.000267
3000064381	6/1/2022	6/15/2022	759.40	14.00	0.003%	0.000378
3000064382	6/1/2022	6/17/2022	40.98	16.00	0.000%	0.000023
3000064383	6/1/2022	6/14/2022	4,100.00	13.00	0.015%	0.001896
3000064384	6/2/2022	6/9/2022	2,506.85	7.00	0.009%	0.000624
3000064385	6/2/2022	6/14/2022	7.00	12.00	0.000%	0.000003
3000064386	6/2/2022	6/7/2022	150.00	5.00	0.001%	0.000027
3000064387	6/2/2022	6/14/2022	370.75	12.00	0.001%	0.000158
3000064388	6/2/2022	6/7/2022	1,489.85	5.00	0.005%	0.000265
3000064389	6/2/2022	6/29/2022	542.50	27.00	0.002%	0.000521
3000064390	6/3/2022	6/10/2022	2,267.40	7.00	0.008%	0.000565
3000064391	6/3/2022	6/9/2022	300.00	6.00	0.001%	0.000064
3000064392	6/3/2022	6/9/2022	1,150.05	6.00	0.004%	0.000245
3000064393	6/3/2022	6/21/2022	600.00	18.00	0.002%	0.000384
3000064394	6/3/2022	7/26/2022	500.00	53.00	0.002%	0.000943
3000064395	6/3/2022	6/21/2022	500.00	18.00	0.002%	0.000320
3000064396	6/3/2022	6/16/2022	500.00	13.00	0.002%	0.000231
3000064397	6/6/2022	6/13/2022	1,997.52	7.00	0.007%	0.000497
3000064399	6/8/2022	6/16/2022	87.40	8.00	0.000%	0.000025
3000064400	6/9/2022	6/17/2022	1,628.90	8.00	0.006%	0.000464
3000064401	6/9/2022	6/15/2022	98.58	6.00	0.000%	0.000021
3000064402	6/9/2022	6/22/2022	112.90	13.00	0.000%	0.000052
3000064403	6/9/2022	6/23/2022	6,000.00	14.00	0.021%	0.002989
3000064404	6/9/2022	7/5/2022	30,000.00	26.00	0.107%	0.027750
3000064405	6/10/2022	7/5/2022	10,000.00	25.00	0.036%	0.008894
3000064406	6/10/2022	6/21/2022	4,970.00	11.00	0.018%	0.001945
3000064407	6/10/2022	6/23/2022	4,101.32	13.00	0.015%	0.001897
3000064408	6/10/2022	6/22/2022	86,000.00	12.00	0.306%	0.036716
3000064409	6/10/2022	6/22/2022	676.60	12.00	0.002%	0.000289
3000064410	6/10/2022	6/22/2022	18,040.39	12.00	0.064%	0.007702
3000064411	6/10/2022	6/28/2022	3,455.91	18.00	0.012%	0.002213
3000064412	6/10/2022	6/23/2022	1,747.92	13.00	0.006%	0.000808
3000064413	6/10/2022	6/22/2022	2,441.09	12.00	0.009%	0.001042
3000064414	6/10/2022	6/22/2022	19,776.27	12.00	0.070%	0.008443
3000064415	6/10/2022	6/22/2022	15,826.37	12.00	0.056%	0.006757
3000064416	6/10/2022	7/5/2022	4,237.84	25.00	0.015%	0.003769
3000064417	6/10/2022	6/22/2022	9,051.18	12.00	0.032%	0.003864
3000064418	6/13/2022	6/22/2022	705.42	9.00	0.003%	0.000226
3000064419	6/13/2022	6/28/2022	2,000.00	15.00	0.007%	0.001067
3000064420	6/13/2022	6/27/2022	300.00	14.00	0.001%	0.000149
3000064422	6/15/2022	6/22/2022	17,500.00	7.00	0.062%	0.004358
3000064423	6/16/2022	6/24/2022	5,742.00	8.00	0.020%	0.001634
3000064424	6/16/2022	6/22/2022	14,553.50	6.00	0.052%	0.003107
3000064425	6/16/2022	6/22/2022	10,000.00	6.00	0.036%	0.002135
3000064426	6/16/2022	6/24/2022	7.00	8.00	0.000%	0.000002
3000064427	6/16/2022	6/22/2022	150.00	6.00	0.001%	0.000032
3000064428	6/16/2022	11/4/2022	363.08	141.00	0.001%	0.001821
3000064429	6/16/2022	6/22/2022	1,489.85	6.00	0.005%	0.000318
3000064430	6/16/2022	6/22/2022	542.50	6.00	0.002%	0.000116
3000064431	6/17/2022	6/23/2022	4,375.00	6.00	0.016%	0.000934
3000064432	6/17/2022	6/22/2022	970.20	5.00	0.003%	0.000173
3000064433	6/17/2022	6/23/2022	298.61	6.00	0.001%	0.000064
3000064434	6/17/2022	8/8/2022	150.00	52.00	0.001%	0.000278
3000064435	6/17/2022	6/22/2022	2,050.00	5.00	0.007%	0.000365
3000064436	6/17/2022	6/27/2022	2,413.94	10.00	0.009%	0.000859
3000064437	6/21/2022	6/29/2022	766.99	8.00	0.003%	0.000218
3000064438	6/21/2022	6/29/2022	360.00	8.00	0.001%	0.000102
3000064439	6/21/2022	7/15/2022	7,902.41	24.00	0.028%	0.006748
3000064440	6/22/2022	8/5/2022	7,500.00	44.00	0.027%	0.011741
3000064441	6/22/2022	9/1/2022	270,000.00	71.00	0.961%	0.682020
3000064442	6/23/2022	7/19/2022	286.41	26.00	0.001%	0.000265
3000064443	6/23/2022	7/8/2022	1,000.00	15.00	0.004%	0.000534
3000064444	6/24/2022	6/29/2022	47.49	5.00	0.000%	0.000008

Check Number	Date	Reconciled	Amount	Unweighted Lead	Weighting Factor	Weighted Lead
3000064445	6/24/2022	7/7/2022	1,095.93	13.00	0.004%	0.000507
3000064446	6/27/2022	7/11/2022	200.00	14.00	0.001%	0.000100
3000064447	6/27/2022	7/5/2022	12,460.00	8.00	0.044%	0.003546
3000064448	6/28/2022	11/18/2022	500.00	143.00	0.002%	0.002544
3000064449	6/28/2022	7/7/2022	924,283.83	9.00	3.288%	0.295953
3000064450	6/28/2022	7/7/2022	500.00	9.00	0.002%	0.000160
3000064451	6/28/2022	8/17/2022	200.00	50.00	0.001%	0.000356
3000064452	6/28/2022	7/11/2022	3,488.50	13.00	0.012%	0.001613
3000064453	6/29/2022	7/6/2022	47.49	7.00	0.000%	0.000012
3000064454	6/29/2022	7/5/2022	53.71	6.00	0.000%	0.000011
3000064455	6/29/2022	7/5/2022	6,944.65	6.00	0.025%	0.001482
3000064456	6/29/2022	7/21/2022	100.00	22.00	0.000%	0.000078
3000064457	6/30/2022	7/6/2022	414.00	6.00	0.001%	0.000088
3000064458	6/30/2022	7/7/2022	118,500.00	7.00	0.422%	0.029512
3000064459	6/30/2022	7/7/2022	7.00	7.00	0.000%	0.000002
3000064460	6/30/2022	7/8/2022	150.00	8.00	0.001%	0.000043
3000064461	6/30/2022	7/12/2022	370.75	12.00	0.001%	0.000158
3000064462	6/30/2022	7/8/2022	1,489.85	8.00	0.005%	0.000424
3000064463	6/30/2022	7/8/2022	542.50	8.00	0.002%	0.000154
3000064464	6/30/2022	8/19/2022	17,400.36	50.00	0.062%	0.030953
3000064465	7/1/2022	7/7/2022	15,000.00	6.00	0.053%	0.003202
3000064466	7/1/2022	7/20/2022	15,000.00	19.00	0.053%	0.010140
3000064467	7/1/2022	7/7/2022	1,660.44	6.00	0.006%	0.000354
3000064468	7/5/2022	7/15/2022	5,856.00	10.00	0.021%	0.002083
3000064469	7/6/2022	7/19/2022	201,148.92	13.00	0.716%	0.093033
3000064470	7/7/2022	8/1/2022	500,425.25	25.00	1.780%	0.445097
3000064471	7/7/2022	8/1/2022	553,613.94	25.00	1.970%	0.492405
3000064472	7/7/2022	8/1/2022	745,447.74	25.00	2.652%	0.663029
3000064473	7/7/2022	8/1/2022	1,729,451.49	25.00	6.153%	1.538238
3000064474	7/8/2022	7/14/2022	98.50	6.00	0.000%	0.000021
3000064475	7/8/2022	7/20/2022	13,500.00	12.00	0.048%	0.005764
3000064476	7/8/2022	7/22/2022	5,979.32	14.00	0.021%	0.002978
3000064477	7/11/2022	7/19/2022	4,100.00	8.00	0.015%	0.001167
3000064478	7/11/2022	7/19/2022	5,850.00	8.00	0.021%	0.001665
3000064479	7/12/2022	7/19/2022	21,989.84	7.00	0.078%	0.005476
3000064480	7/12/2022	7/27/2022	3,856.08	15.00	0.014%	0.002058
3000064481	7/12/2022	7/20/2022	3,685.98	8.00	0.013%	0.001049
3000064482	7/12/2022	7/26/2022	2,132.37	14.00	0.008%	0.001062
3000064483	7/12/2022	7/22/2022	22,322.02	10.00	0.079%	0.007942
3000064484	7/12/2022	7/22/2022	10,857.56	10.00	0.039%	0.003863
3000064485	7/12/2022	7/21/2022	20,747.52	9.00	0.074%	0.006643
3000064486	7/12/2022	8/1/2022	3,589.33	20.00	0.013%	0.002554
3000064487	7/12/2022	7/19/2022	8,601.22	7.00	0.031%	0.002142
3000064488	7/13/2022	8/1/2022	225,205.38	19.00	0.801%	0.152233
3000064489	7/14/2022	7/26/2022	7.00	12.00	0.000%	0.000003
3000064490	7/14/2022	7/19/2022	150.00	5.00	0.001%	0.000027
3000064491	7/14/2022	7/26/2022	112.26	12.00	0.000%	0.000048
3000064492	7/14/2022	7/19/2022	1,489.85	5.00	0.005%	0.000265
3000064493	7/14/2022	7/19/2022	542.50	5.00	0.002%	0.000097
3000064494	7/15/2022	7/21/2022	705.42	6.00	0.003%	0.000151
3000064495	7/15/2022	7/25/2022	775.88	10.00	0.003%	0.000276
3000064496	7/15/2022	7/21/2022	1,940.00	6.00	0.007%	0.000414
3000064497	7/15/2022	7/21/2022	5,933.40	6.00	0.021%	0.001267
3000064498	7/15/2022	7/20/2022	10,000.00	5.00	0.036%	0.001779
3000064499	7/15/2022	7/27/2022	4,742.19	12.00	0.017%	0.002025
3000064500	7/15/2022	7/28/2022	50.00	13.00	0.000%	0.000023
3000064501	7/15/2022	8/9/2022	100.00	25.00	0.000%	0.000089
3000064502	7/15/2022	8/18/2022	50.00	34.00	0.000%	0.000060
3000064503	7/15/2022	7/27/2022	50.00	12.00	0.000%	0.000021
3000064504	7/15/2022	8/8/2022	50.00	24.00	0.000%	0.000043
3000064505	7/15/2022	7/27/2022	459.00	12.00	0.002%	0.000196
3000064506	7/15/2022	7/27/2022	50.00	12.00	0.000%	0.000021
3000064507	7/15/2022	7/28/2022	743.47	13.00	0.003%	0.000344
3000064508	7/18/2022	7/26/2022	5,375.00	8.00	0.019%	0.001530
3000064509	7/18/2022	8/1/2022	1,518.21	14.00	0.005%	0.000756

Check Number	Date	Reconciled	Amount	Unweighted Lead	Weighting Factor	Weighted Lead
3000064510	7/19/2022	7/29/2022	501.42	10.00	0.002%	0.000178
3000064511	7/19/2022	7/27/2022	89.80	8.00	0.000%	0.000026
3000064512	7/19/2022	7/28/2022	34,100.00	9.00	0.121%	0.010919
3000064513	7/19/2022	8/15/2022	82.00	27.00	0.000%	0.000079
3000064514	7/20/2022	7/27/2022	3,512.20	7.00	0.012%	0.000875
3000064515	7/20/2022	7/28/2022	297,385.57	8.00	1.058%	0.084642
3000064516	7/20/2022	7/28/2022	167,274.81	8.00	0.595%	0.047610
3000064517	7/20/2022	7/26/2022	36,013.96	6.00	0.128%	0.007688
3000064518	7/20/2022	7/28/2022	135,000.00	8.00	0.480%	0.038424
3000064519	7/21/2022	2/10/2023	420.00	204.00	0.001%	0.003048
3000064520	7/21/2022	7/27/2022	645.00	6.00	0.002%	0.000138
3000064521	7/21/2022	7/27/2022	2,050.00	6.00	0.007%	0.000438
3000064522	7/21/2022	8/9/2022	3,625.90	19.00	0.013%	0.002451
3000064523	7/21/2022	8/1/2022	14,077.14	11.00	0.050%	0.005509
3000064524	7/21/2022	7/28/2022	50,300.00	7.00	0.179%	0.012527
3000064525	7/22/2022	8/1/2022	400.00	10.00	0.001%	0.000142
3000064526	7/22/2022	7/28/2022	239.36	6.00	0.001%	0.000051
3000064527	7/22/2022	8/5/2022	500.00	14.00	0.002%	0.000249
3000064528	7/22/2022	8/9/2022	175.00	18.00	0.001%	0.000112
3000064529	7/25/2022	8/1/2022	1,095.93	7.00	0.004%	0.000273
3000064530	7/25/2022	7/29/2022	73.80	4.00	0.000%	0.000011
3000064531	7/25/2022	8/23/2022	4,800.00	29.00	0.017%	0.004952
3000064532	7/25/2022	8/10/2022	561.42	16.00	0.002%	0.000320
3000064533	7/26/2022	8/2/2022	77.80	7.00	0.000%	0.000019
3000064534	7/26/2022	8/2/2022	94.98	7.00	0.000%	0.000024
3000064535	7/28/2022	8/11/2022	37.50	14.00	0.000%	0.000019
3000064536	7/28/2022	8/2/2022	1,489.85	5.00	0.005%	0.000265
3000064537	7/28/2022	9/29/2022	129.40	63.00	0.000%	0.000290
3000064538	7/29/2022	8/5/2022	112.95	7.00	0.000%	0.000028
3000064539	7/29/2022	8/5/2022	6,713.00	7.00	0.024%	0.001672
3000064540	7/29/2022	8/9/2022	94,620.96	11.00	0.337%	0.037030
3000064541	7/29/2022	8/12/2022	8,545.67	14.00	0.030%	0.004256
3000064542	8/2/2022	8/16/2022	94.35	14.00	0.000%	0.000047
3000064543	8/2/2022	8/11/2022	112.95	9.00	0.000%	0.000036
3000064544	8/3/2022	8/15/2022	98.27	12.00	0.000%	0.000042
3000064545	8/3/2022	8/12/2022	1,150.00	9.00	0.004%	0.000368
3000064547	8/5/2022	8/12/2022	2,914.56	7.00	0.010%	0.000726
3000064548	8/5/2022	8/10/2022	20.00	5.00	0.000%	0.000004
3000064549	8/5/2022	9/1/2022	250.00	27.00	0.001%	0.000240
3000064550	8/5/2022	8/23/2022	100.00	18.00	0.000%	0.000064
3000064551	8/5/2022	9/2/2022	150.00	28.00	0.001%	0.000149
3000064552	8/5/2022	8/23/2022	50.00	18.00	0.000%	0.000032
3000064553	8/5/2022	8/30/2022	50.00	25.00	0.000%	0.000044
3000064554	8/5/2022	8/18/2022	1,164.88	13.00	0.004%	0.000539
3000064555	8/8/2022	8/30/2022	39.82	22.00	0.000%	0.000031
3000064556	8/10/2022	8/22/2022	685.48	12.00	0.002%	0.000293
3000064557	8/10/2022	9/27/2022	573.00	48.00	0.002%	0.000979
3000064558	8/10/2022	8/24/2022	796.00	14.00	0.003%	0.000396
3000064559	8/11/2022	8/23/2022	16,000.00	12.00	0.057%	0.006831
3000064560	8/11/2022	8/23/2022	5,775.00	12.00	0.021%	0.002466
3000064561	8/11/2022	8/16/2022	665.00	5.00	0.002%	0.000118
3000064562	8/11/2022	8/18/2022	7.00	7.00	0.000%	0.000002
3000064563	8/11/2022	8/16/2022	150.00	5.00	0.001%	0.000027
3000064564	8/11/2022	8/16/2022	1,735.39	5.00	0.006%	0.000309
3000064565	8/11/2022	8/16/2022	542.50	5.00	0.002%	0.000097
3000064566	8/12/2022	8/22/2022	12,985.00	10.00	0.046%	0.004620
3000064567	8/12/2022	8/18/2022	2,050.00	6.00	0.007%	0.000438
3000064568	8/12/2022	8/29/2022	717.50	17.00	0.003%	0.000434
3000064569	8/12/2022	8/18/2022	26,870.82	6.00	0.096%	0.005736
3000064570	8/12/2022	8/17/2022	11,991.14	5.00	0.043%	0.002133
3000064571	8/12/2022	8/24/2022	4,938.21	12.00	0.018%	0.002108
3000064572	8/12/2022	8/18/2022	2,466.25	6.00	0.009%	0.000526
3000064573	8/12/2022	9/21/2022	3,828.96	40.00	0.014%	0.005449
3000064574	8/12/2022	8/24/2022	25,564.27	12.00	0.091%	0.010914
3000064575	8/12/2022	8/22/2022	9,834.10	10.00	0.035%	0.003499

Check Number	Date	Reconciled	Amount	Unweighted Lead	Weighting Factor	Weighted Lead
3000064576	8/12/2022	8/22/2022	2,488.35	10.00	0.009%	0.000885
3000064577	8/12/2022	9/8/2022	420.00	27.00	0.001%	0.000403
3000064578	8/15/2022	8/29/2022	5,000.00	14.00	0.018%	0.002490
3000064579	8/15/2022	8/22/2022	1,400.83	7.00	0.005%	0.000349
3000064580	8/17/2022	8/24/2022	705.42	7.00	0.003%	0.000176
3000064581	8/17/2022	9/1/2022	1,208.80	15.00	0.004%	0.000645
3000064582	8/17/2022	8/24/2022	2,124,106.08	7.00	7.557%	0.528992
3000064583	8/19/2022	8/29/2022	776.93	10.00	0.003%	0.000276
3000064584	8/19/2022	8/25/2022	10.36	6.00	0.000%	0.000002
3000064585	8/19/2022	8/26/2022	24,559.80	7.00	0.087%	0.006116
3000064586	8/19/2022	8/26/2022	4,474.19	7.00	0.016%	0.001114
3000064587	8/22/2022	11/15/2022	500.00	85.00	0.002%	0.001512
3000064588	8/22/2022	9/13/2022	1,000.00	22.00	0.004%	0.000783
3000064589	8/23/2022	9/8/2022	25,000.00	16.00	0.089%	0.014231
3000064590	8/23/2022	8/30/2022	94.98	7.00	0.000%	0.000024
3000064591	8/24/2022	8/30/2022	17.24	6.00	0.000%	0.000004
3000064592	8/25/2022	8/31/2022	1,095.93	6.00	0.004%	0.000234
3000064593	8/25/2022	9/1/2022	7.00	7.00	0.000%	0.000002
3000064594	8/25/2022	8/30/2022	150.00	5.00	0.001%	0.000027
3000064595	8/25/2022	8/30/2022	1,735.39	5.00	0.006%	0.000309
3000064596	8/25/2022	8/31/2022	542.50	6.00	0.002%	0.000116
3000064598	8/26/2022	9/9/2022	4,254.32	14.00	0.015%	0.002119
3000064599	8/26/2022	9/9/2022	42,234.36	14.00	0.150%	0.021036
3000064600	8/26/2022	9/13/2022	10,699.25	18.00	0.038%	0.006852
3000064601	8/29/2022	9/7/2022	12,706.82	9.00	0.045%	0.004069
3000064602	8/30/2022	9/7/2022	4,100.00	8.00	0.015%	0.001167
3000064603	8/30/2022	9/8/2022	73,251.00	9.00	0.261%	0.023455
3000064604	8/30/2022	9/7/2022	6,910.00	8.00	0.025%	0.001967
3000064605	8/30/2022	9/7/2022	26,520.00	8.00	0.094%	0.007548
3000064606	8/30/2022	10/4/2022	750.00	35.00	0.003%	0.000934
3000064607	8/31/2022	9/8/2022	81,052.00	8.00	0.288%	0.023069
3000064608	9/1/2022	9/30/2022	1,000.00	29.00	0.004%	0.001032
3000064609	9/6/2022	9/22/2022	3,500.00	16.00	0.012%	0.001992
3000064610	9/6/2022	9/9/2022	1,686.43	3.00	0.006%	0.000180
3000064611	9/6/2022	9/15/2022	2,980.56	9.00	0.011%	0.000954
3000064612	9/6/2022	9/15/2022	888,144.91	9.00	3.160%	0.284382
3000064613	9/6/2022	9/14/2022	12,011.65	8.00	0.043%	0.003419
3000064614	9/6/2022	9/22/2022	7,169.95	16.00	0.026%	0.004081
3000064615	9/6/2022	9/19/2022	19,573.61	13.00	0.070%	0.009053
3000064617	9/7/2022	9/14/2022	98.27	7.00	0.000%	0.000024
3000064618	9/7/2022	9/14/2022	1,500.00	7.00	0.005%	0.000374
3000064619	9/7/2022	9/12/2022	3,242.50	5.00	0.012%	0.000577
3000064620	9/7/2022	9/14/2022	55,669.55	7.00	0.198%	0.013864
3000064621	9/8/2022	9/20/2022	705.42	12.00	0.003%	0.000301
3000064622	9/8/2022	9/21/2022	2,761.95	13.00	0.010%	0.001277
3000064623	9/8/2022	9/15/2022	7.00	7.00	0.000%	0.000002
3000064624	9/8/2022	9/26/2022	150.00	18.00	0.001%	0.000096
3000064625	9/8/2022	9/13/2022	1,735.39	5.00	0.006%	0.000309
3000064626	9/8/2022	10/17/2022	542.50	39.00	0.002%	0.000753
3000064627	9/9/2022	9/21/2022	10,710.00	12.00	0.038%	0.004572
3000064628	9/12/2022	9/27/2022	500.00	15.00	0.002%	0.000267
3000064629	9/12/2022	9/19/2022	3,604.00	7.00	0.013%	0.000898
3000064630	9/12/2022	9/16/2022	4,100.00	4.00	0.015%	0.000583
3000064631	9/12/2022	9/21/2022	31,201.20	9.00	0.111%	0.009991
3000064632	9/12/2022	9/21/2022	5,431.58	9.00	0.019%	0.001739
3000064633	9/12/2022	9/23/2022	2,554.91	11.00	0.009%	0.001000
3000064634	9/12/2022	9/22/2022	26,507.54	10.00	0.094%	0.009431
3000064635	9/12/2022	9/20/2022	10,201.11	8.00	0.036%	0.002903
3000064636	9/13/2022	10/6/2022	7,000.00	23.00	0.025%	0.005728
3000064637	9/14/2022	9/26/2022	29,069.31	12.00	0.103%	0.012411
3000064638	9/14/2022	9/23/2022	5,500.00	9.00	0.020%	0.001761
3000064639	9/14/2022	9/26/2022	3,740.01	12.00	0.013%	0.001597
3000064640	9/14/2022	9/29/2022	53,307.26	15.00	0.190%	0.028448
3000064641	9/15/2022	9/21/2022	2,050.00	6.00	0.007%	0.000438
3000064642	9/16/2022	9/23/2022	448.00	7.00	0.002%	0.000112

Check Number	Date	Reconciled	Amount	Unweighted Lead	Weighting Factor	Weighted Lead
3000064643	9/19/2022	9/28/2022	89.80	9.00	0.000%	0.000029
3000064644	9/19/2022	9/27/2022	1,609.50	8.00	0.006%	0.000458
3000064645	9/19/2022	10/7/2022	46.95	18.00	0.000%	0.000030
3000064646	9/19/2022	10/3/2022	1,854.00	14.00	0.007%	0.000923
3000064647	9/20/2022	9/28/2022	776.93	8.00	0.003%	0.000221
3000064648	9/20/2022	9/28/2022	4,725.29	8.00	0.017%	0.001345
3000064649	9/21/2022	9/29/2022	3,490.97	8.00	0.012%	0.000994
3000064650	9/21/2022	10/12/2022	9,236.00	21.00	0.033%	0.006900
3000064651	9/22/2022	10/4/2022	7.00	12.00	0.000%	0.000003
3000064652	9/22/2022	9/27/2022	150.00	5.00	0.001%	0.000027
3000064653	9/22/2022	9/27/2022	1,735.39	5.00	0.006%	0.000309
3000064654	9/22/2022	9/27/2022	542.50	5.00	0.002%	0.000097
3000064655	9/23/2022	9/29/2022	1,095.93	6.00	0.004%	0.000234
3000064656	9/23/2022	9/29/2022	8,083.94	6.00	0.029%	0.001726
3000064657	9/23/2022	9/30/2022	235.88	7.00	0.001%	0.000059
3000064658	9/26/2022	10/5/2022	1,071.00	9.00	0.004%	0.000343
3000064659	9/26/2022	10/5/2022	2,519.91	9.00	0.009%	0.000807
3000064660	9/28/2022	10/5/2022	714.00	7.00	0.003%	0.000178
3000064661	9/30/2022	12/16/2022	560.00	77.00	0.002%	0.001534
3000064662	9/30/2022	10/24/2022	112.95	24.00	0.000%	0.000096
3000064663	9/30/2022	10/12/2022	14,984.00	12.00	0.053%	0.006397
3000064664	9/30/2022	10/19/2022	5,282.14	19.00	0.019%	0.003571
3000064665	9/30/2022	10/17/2022	10,597.45	17.00	0.038%	0.006410
			$28,107,672.36			12.73

KENTUCKY POWER COMPANY
LEAD LAG STUDY
TAXES OTHER THAN INCOME TAXES

Category	Weighted Expense Lead
Sales/Use Tax	40.23
Utility Gross Receipts License Tax (UGRLT)	35.28
Federal Excise Taxes	76.42
Local Franchise Fee	46.12
Kentucky Sales and Use Tax - Energy Exemption Annual Return	59.42
Local Street Lighting Fee	207.23
Property /Real Estate Tax	264.85
Federal Unemployment Taxes	75.24
State Unemployment Taxes - Kentucky	75.21
State Unemployment Taxes - West Virginia	75.31

Sales/Use Tax

Payee	Method of Payment	Amount	Period Beginning	Period Ending	Tax Due Date	Payment Date	Weighting Factor	Service Lead	Payment Lead	Float	Total Lead	Weighted Lead
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)
Kentucky Department of Revenue	EFT	$ 812,973.10	9/1/2021	9/30/2021	10/25/2021	10/25/2021	7.715%	15.00	25.00	-	40.00	3.09
Kentucky Department of Revenue	EFT	609,924.14	10/1/2021	10/31/2021	11/25/2021	11/25/2021	5.788%	15.50	25.00	-	40.50	2.34
Kentucky Department of Revenue	EFT	795,411.10	11/1/2021	11/30/2021	12/25/2021	12/25/2021	7.549%	15.00	25.00	-	40.00	3.02
Kentucky Department of Revenue	EFT	1,013,081.14	12/1/2021	12/31/2021	1/25/2022	1/25/2022	9.615%	15.50	25.00	-	40.50	3.89
Kentucky Department of Revenue	EFT	1,155,705.84	1/1/2022	1/31/2022	2/25/2022	2/25/2022	10.968%	15.50	25.00	-	40.50	4.44
Kentucky Department of Revenue	EFT	764,164.84	2/1/2022	2/28/2022	3/25/2022	3/25/2022	7.252%	14.00	25.00	-	39.00	2.83
Kentucky Department of Revenue	EFT	764,127.78	3/1/2022	3/31/2022	4/25/2022	4/25/2022	7.252%	15.50	25.00	-	40.50	2.94
Kentucky Department of Revenue	EFT	723,873.12	4/1/2022	4/30/2022	5/25/2022	5/25/2022	6.870%	15.00	25.00	-	40.00	2.75
Kentucky Department of Revenue	EFT	843,183.60	5/1/2022	5/31/2022	6/25/2022	6/25/2022	8.002%	15.50	25.00	-	40.50	3.24
Kentucky Department of Revenue	EFT	1,005,316.78	6/1/2022	6/30/2022	7/25/2022	7/25/2022	9.541%	15.00	25.00	-	40.00	3.82
Kentucky Department of Revenue	EFT	1,001,807.78	7/1/2022	7/31/2022	8/25/2022	8/25/2022	9.508%	15.50	25.00	-	40.50	3.85
Kentucky Department of Revenue	EFT	1,047,432.12	8/1/2022	8/31/2022	9/25/2022	9/25/2022	9.941%	15.50	25.00	-	40.50	4.03
		$ 10,537,001.34										40.23

Utility Gross Receipts License Tax (UGRLT

Payee	Method of Payment	Amount	Period Beginning	Period Ending	Tax Due Date	Payment Date	Weighting Factor	Service Lead	Payment Lead	Float	Total Lead	Weighted Lead
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)
Kentucky Department of Revenue	EFT	$ 1,071,988.10	9/1/2021	9/30/2021	10/20/2021	10/20/2021	7.572%	15.00	20.00	-	35.00	2.65
Kentucky Department of Revenue	EFT	942,341.42	10/1/2021	10/31/2021	11/21/2021	11/21/2021	6.656%	15.50	21.00	-	36.50	2.43
Kentucky Department of Revenue	EFT	982,540.23	11/1/2021	11/30/2021	12/20/2021	12/20/2021	6.940%	15.00	20.00	-	35.00	2.43
Kentucky Department of Revenue	EFT	1,324,688.65	12/1/2021	12/31/2021	1/20/2022	1/20/2022	9.356%	15.50	20.00	-	35.50	3.32
Kentucky Department of Revenue	EFT	1,550,933.02	1/1/2022	1/31/2022	2/20/2022	2/20/2022	10.954%	15.50	20.00	-	35.50	3.89
Kentucky Department of Revenue	EFT	1,291,103.78	2/1/2022	2/28/2022	3/20/2022	3/20/2022	9.119%	14.00	20.00	-	34.00	3.10
Kentucky Department of Revenue	EFT	1,061,071.29	3/1/2022	3/31/2022	4/20/2022	4/20/2022	7.494%	15.50	20.00	-	35.50	2.66
Kentucky Department of Revenue	EFT	1,067,232.37	4/1/2022	4/30/2022	5/20/2022	5/20/2022	7.538%	15.00	20.00	-	35.00	2.64
Kentucky Department of Revenue	EFT	1,023,913.44	5/1/2022	5/31/2022	6/20/2022	6/20/2022	7.232%	15.50	20.00	-	35.50	2.57
Kentucky Department of Revenue	EFT	1,184,085.24	6/1/2022	6/30/2022	7/20/2022	7/20/2022	8.363%	15.00	20.00	-	35.00	2.93
Kentucky Department of Revenue	EFT	1,332,068.65	7/1/2022	7/31/2022	8/20/2022	8/20/2022	9.409%	15.50	20.00	-	35.50	3.34
Kentucky Department of Revenue	EFT	1,326,060.71	8/1/2022	8/31/2022	9/20/2022	9/20/2022	9.366%	15.50	20.00	-	35.50	3.32
		$ 14,158,026.90										35.28

Federal Excise Taxes

Payee	Method of Payment	Amount	Period Beginning	Period Ending	Due Date	Payment Date	Weighting Factor	Service Lead	Payment Lead	Float	Total Lead	Weighted Lead
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)
Internal Revenue Service	EFT	$ 877.25	7/1/2021	9/30/2021	10/31/2021	10/31/2021	29.534%	46.00	31.00	-	77.00	22.74
Internal Revenue Service	EFT	584.90	10/1/2021	12/31/2021	1/31/2022	1/31/2022	19.692%	46.00	31.00	-	77.00	15.16
Internal Revenue Service	EFT	638.06	1/1/2022	3/31/2022	4/30/2022	4/30/2022	21.481%	45.00	30.00	-	75.00	16.11
Internal Revenue Service	EFT	870.09	4/1/2022	6/30/2022	7/31/2022	7/31/2022	29.293%	45.50	31.00	-	76.50	22.41
		$ 2,970.30										76.42

Local Franchise Fee

Payee	Method of Payment	Amount	Period Beginning	Period Ending	Due Date	Payment Date	Weighting Factor	Service Lead	Payment Lead	Float	Total Lead	Weighted Lead
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)
Various Localities	Check	$ 59,713.01	9/1/2021	9/30/2021	10/12/2021	10/12/2021	2.133%	15.00	12.00	12.73	39.73	0.85
Various Localities	Check	550,068.92	9/1/2021	9/30/2021	10/21/2021	10/21/2021	19.652%	15.00	21.00	12.73	48.73	9.58
Various Localities	Check	51,293.33	10/1/2021	10/31/2021	11/12/2021	11/12/2021	1.832%	15.50	12.00	12.73	40.23	0.74
Various Localities	Check	2,933.50	10/1/2021	10/31/2021	11/20/2021	11/20/2021	0.105%	15.50	20.00	12.73	48.23	0.05
Various Localities	Check	47,244.59	11/1/2021	11/30/2021	12/12/2021	12/12/2021	1.688%	15.00	12.00	12.73	39.73	0.67
Various Localities	Check	2,296.94	11/1/2021	11/30/2021	12/20/2021	12/20/2021	0.082%	15.00	20.00	12.73	47.73	0.04
Various Localities	Check	60,842.24	12/1/2021	12/31/2021	1/12/2022	1/12/2022	2.174%	15.50	12.00	12.73	40.23	0.87
Various Localities	Check	481,273.01	12/1/2021	12/31/2021	1/20/2022	1/20/2022	17.194%	15.50	20.00	12.73	48.23	8.29
Various Localities	Check	70,852.78	1/1/2022	1/31/2022	2/12/2022	2/12/2022	2.531%	15.50	12.00	12.73	40.23	1.02
Various Localities	Check	3,322.16	1/1/2022	1/31/2022	2/20/2022	2/20/2022	0.119%	15.50	20.00	12.73	48.23	0.06
Various Localities	Check	61,905.48	2/1/2022	2/28/2022	3/12/2022	3/12/2022	2.212%	14.00	12.00	12.73	38.73	0.86
Various Localities	Check	2,851.38	2/1/2022	2/28/2022	3/20/2022	3/20/2022	0.102%	14.00	20.00	12.73	46.73	0.05

Various Localities	Check	53,408.82	3/1/2022	3/31/2022	4/12/2022	4/12/2022	1.908%	15.50	12.00	12.73	40.23	0.77
Various Localities	Check	523,122.87	3/1/2022	3/31/2022	4/20/2022	4/20/2022	18.689%	15.50	20.00	12.73	48.23	9.01
Various Localities	Check	52,584.41	4/1/2022	4/30/2022	5/12/2022	5/12/2022	1.879%	15.00	12.00	12.73	39.73	0.75
Various Localities	Check	2,352.31	4/1/2022	4/30/2022	5/20/2022	5/20/2022	0.084%	15.00	20.00	12.73	47.73	0.04
Various Localities	Check	52,764.84	5/1/2022	5/31/2022	6/12/2022	6/12/2022	1.885%	15.50	12.00	12.73	40.23	0.76
Various Localities	Check	2,413.94	5/1/2022	5/31/2022	6/20/2022	6/20/2022	0.086%	15.50	20.00	12.73	48.23	0.04
Various Localities	Check	58,901.53	6/1/2022	6/30/2022	7/12/2022	7/12/2022	2.104%	15.00	12.00	12.73	39.73	0.84
Various Localities	Check	504,186.54	6/1/2022	6/30/2022	7/20/2022	7/20/2022	18.012%	15.00	20.00	12.73	47.73	8.60
Various Localities	Check	69,673.65	7/1/2022	7/31/2022	8/12/2022	8/12/2022	2.489%	15.50	12.00	12.73	40.23	1.00
Various Localities	Check	4,474.19	7/1/2022	7/31/2022	8/20/2022	8/20/2022	0.160%	15.50	20.00	12.73	48.23	0.08
Various Localities	Check	75,896.34	8/1/2022	8/31/2022	9/12/2022	9/12/2022	2.711%	15.50	12.00	12.73	40.23	1.09
Various Localities	Check	4,725.29	8/1/2022	8/31/2022	9/20/2022	9/20/2022	0.169%	15.50	20.00	12.73	48.23	0.08
		$ 2,799,102.07										46.12

Kentucky Sales and Use Tax - Energy Exemption Annual Return

Payee	Method of Payment	Amount	Period Beginning	Period Ending	Due Date	Payment Date	Weighting Factor	Service Lead	Payment Lead	Float	Total Lead	Weighted Lead
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)
Kentucky Department of Revenue	EFT	$ 2,974.62	9/1/2021	9/30/2021	10/25/2021	10/25/2021	7.363%	15.00	25.00	-	40.00	2.95
Kentucky Department of Revenue	EFT	2,974.62	10/1/2021	10/31/2021	11/25/2021	11/25/2021	7.363%	15.50	25.00	-	40.50	2.98
Kentucky Department of Revenue	EFT	2,974.62	11/1/2021	11/30/2021	12/25/2021	12/25/2021	7.363%	15.00	25.00	-	40.00	2.95
Kentucky Department of Revenue	EFT	2,974.62	12/1/2021	12/31/2021	1/25/2022	1/25/2022	7.363%	15.50	25.00	-	40.50	2.98
Kentucky Department of Revenue	EFT	3,209.82	1/1/2022	1/31/2022	2/25/2022	2/25/2022	7.945%	15.50	25.00	-	40.50	3.22
Kentucky Department of Revenue	EFT	3,209.82	2/1/2022	2/28/2022	3/25/2022	3/25/2022	7.945%	14.00	25.00	-	39.00	3.10
Kentucky Department of Revenue	Check	2,822.42	1/1/2021	12/31/2021	4/30/2022	4/30/2022	6.986%	182.50	120.00	12.73	315.23	22.02
Kentucky Department of Revenue	EFT	3,209.82	3/1/2022	3/31/2022	4/25/2022	4/25/2022	7.945%	15.50	25.00	-	40.50	3.22
Kentucky Department of Revenue	EFT	3,209.82	4/1/2022	4/30/2022	5/25/2022	5/25/2022	7.945%	15.00	25.00	-	40.00	3.18
Kentucky Department of Revenue	EFT	3,209.82	5/1/2022	5/31/2022	6/25/2022	6/25/2022	7.945%	15.50	25.00	-	40.50	3.22
Kentucky Department of Revenue	EFT	3,209.82	6/1/2022	6/30/2022	7/25/2022	7/25/2022	7.945%	15.00	25.00	-	40.00	3.18
Kentucky Department of Revenue	EFT	3,209.82	7/1/2022	7/31/2022	8/25/2022	8/25/2022	7.945%	15.50	25.00	-	40.50	3.22
Kentucky Department of Revenue	EFT	3,209.82	8/1/2022	8/31/2022	9/25/2022	9/25/2022	7.945%	15.50	25.00	-	40.50	3.22
		$ 40,399.46										59.42

Local Street Lighting Fee

Payee	Method of Payment	Amount	Period Beginning	Period Ending	Due Date	Payment Date	Weighting Factor	Service Lead	Payment Lead	Float	Total Lead	Weighted Lead
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)
Various Localities	Check	$ 18,199.17	10/1/2020	9/30/2021	10/12/2021	10/12/2021	13.073%	182.50	12.00	12.73	207.23	27.09
Various Localities	Check	2,062.17	12/1/2020	11/30/2021	12/12/2021	12/12/2021	1.481%	182.50	12.00	12.73	207.23	3.07
Various Localities	Check	17,393.72	1/1/2021	12/31/2021	1/12/2022	1/12/2022	12.494%	182.50	12.00	12.73	207.23	25.89
Various Localities	Check	1,351.04	3/1/2021	2/28/2022	3/12/2022	3/12/2022	0.970%	182.50	12.00	12.73	207.23	2.01
Various Localities	Check	18,158.11	4/1/2021	3/31/2022	4/12/2022	4/12/2022	13.043%	182.50	12.00	12.73	207.23	27.03
Various Localities	Check	3,050.12	5/1/2021	4/30/2022	5/12/2022	5/12/2022	2.191%	182.50	12.00	12.73	207.23	4.54
Various Localities	Check	21,812.13	6/1/2021	5/31/2022	6/12/2022	6/12/2022	15.668%	182.50	12.00	12.73	207.23	32.47
Various Localities	Check	38,880.39	7/1/2021	6/30/2022	7/12/2022	7/12/2022	27.928%	182.50	12.00	12.73	207.23	57.87
Various Localities	Check	18,308.45	8/1/2021	7/31/2022	8/12/2022	8/12/2022	13.151%	182.50	12.00	12.73	207.23	27.25
		$ 139,215.30										207.23

Property /Real Estate Tax

Payee	Method of Payment	Amount	Period Beginning	Period Ending	Due Date	Payment Date	Weighting Factor	Service Lead	Payment Lead	Float	Total Lead	Weighted Lead
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)
City of Bellefonte	Check	$ 173.94	1/1/2021	12/31/2021	12/31/2021	12/31/2021	0.001%	182.50	-	12.73	195.23	0.00
Elliot County	Check	3,469.44	1/1/2021	12/31/2021	6/3/2022	6/3/2022	0.023%	182.50	154.00	12.73	349.23	0.08
City of Flatwoods	Check	436.01	1/1/2021	12/31/2021	12/3/2021	12/3/2021	0.003%	182.50	(28.00)	12.73	167.23	0.00
Boyd C County	Check	1,675.54	1/1/2021	12/31/2021	5/21/2022	5/21/2022	0.011%	182.50	141.00	12.73	336.23	0.04
Greenup County	Check	5,768.48	1/1/2021	12/31/2021	2/22/2022	2/22/2022	0.039%	182.50	53.00	12.73	248.23	0.10
Perry County	Check	14,299.61	1/1/2021	12/31/2021	3/7/2022	3/7/2022	0.095%	182.50	66.00	12.73	261.23	0.25
City of Louisa	Check	7,169.95	1/1/2021	12/31/2021	3/31/2022	3/31/2022	0.048%	182.50	90.00	12.73	285.23	0.14
Perry County	Check	888,144.91	1/1/2021	12/31/2021	3/7/2022	3/7/2022	5.931%	182.50	66.00	12.73	261.23	15.49
Wolfe County	Check	12,011.65	1/1/2021	12/31/2021	2/23/2022	2/23/2022	0.080%	182.50	54.00	12.73	249.23	0.20
Pike County	Check	2,124,106.08	1/1/2021	12/31/2021	3/27/2022	3/27/2022	14.184%	182.50	86.00	12.73	281.23	39.89
City of Jackson	Check	6,944.65	1/1/2021	12/31/2021	3/14/2022	3/14/2022	0.046%	182.50	73.00	12.73	268.23	0.12
Johnson County	Check	201,148.92	1/1/2021	12/31/2021	2/28/2022	2/28/2022	1.343%	182.50	59.00	12.73	254.23	3.41
City of Bellefonte	Check	53.71	1/1/2021	12/31/2021	4/15/2022	4/15/2022	0.000%	182.50	105.00	12.73	300.23	0.00
Martin County	Check	383,997.71	1/1/2021	12/31/2021	3/24/2022	3/24/2022	2.564%	182.50	83.00	12.73	278.23	7.13
City of Jenkins	Check	11,563.77	1/1/2021	12/31/2021	4/13/2022	4/13/2022	0.077%	182.50	103.00	12.73	298.23	0.23
Bracken County	Check	14,881.69	1/1/2021	12/31/2021	2/28/2022	2/28/2022	0.099%	182.50	59.00	12.73	254.23	0.25
Elliot County	Check	3,549.76	1/1/2021	12/31/2021	6/3/2022	6/3/2022	0.024%	182.50	154.00	12.73	349.23	0.08
City of Neon	Check	7,802.69	1/1/2021	12/31/2021	3/8/2022	3/8/2022	0.052%	182.50	67.00	12.73	262.23	0.14
Town of Hindman	Check	1,777.32	1/1/2021	12/31/2021	2/28/2022	2/28/2022	0.012%	182.50	59.00	12.73	254.23	0.03
Letcher County	Check	665,139.93	1/1/2021	12/31/2021	2/27/2022	2/27/2022	4.442%	182.50	58.00	12.73	253.23	11.25
City of Russell	Check	51,662.47	1/1/2021	12/31/2021	2/22/2022	2/22/2022	0.345%	182.50	53.00	12.73	248.23	0.86
Breathitt County	Check	313,539.26	1/1/2021	12/31/2021	2/25/2022	2/25/2022	2.094%	182.50	56.00	12.73	251.23	5.26
Jackson Independent School District	Check	9,811.38	1/1/2021	12/31/2021	2/20/2022	2/20/2022	0.066%	182.50	51.00	12.73	246.23	0.16
Lawrence County	Check	743,281.26	1/1/2021	12/31/2021	3/20/2022	3/20/2022	4.963%	182.50	79.00	12.73	274.23	13.61
Magoffin County	Check	196,020.36	1/1/2021	12/31/2021	2/21/2022	2/21/2022	1.309%	182.50	52.00	12.73	247.23	3.24
City of Olive Hill	Check	218.56	1/1/2021	12/31/2021	2/28/2022	2/28/2022	0.001%	182.50	59.00	12.73	254.23	0.00

City of Pikeville	Check	25,591.02	1/1/2021	12/31/2021	4/15/2022	4/15/2022	0.171%	182.50	105.00	12.73	300.23	0.51
Union County	Check	1,802.52	1/1/2021	12/31/2021	3/31/2022	3/31/2022	0.012%	182.50	90.00	12.73	285.23	0.03
City of Wayland	Check	4,524.00	1/1/2021	12/31/2021	5/1/2022	5/1/2022	0.030%	182.50	121.00	12.73	316.23	0.10
Boyd County	Check	1,007,995.87	1/1/2021	12/31/2021	5/21/2022	5/21/2022	6.731%	182.50	141.00	12.73	336.23	22.63
City of Catlettsburg	Check	10,391.73	1/1/2021	12/31/2021	2/15/2022	2/15/2022	0.069%	182.50	46.00	12.73	241.23	0.17
Coal Run Village	Check	914.69	1/1/2021	12/31/2021	2/28/2022	2/28/2022	0.006%	182.50	59.00	12.73	254.23	0.02
City of Flatwoods	Check	9.71	1/1/2021	12/31/2021	3/24/2022	3/24/2022	0.000%	182.50	83.00	12.73	278.23	0.00
City of Grayson	Check	7,570.91	1/1/2021	12/31/2021	6/4/2022	6/4/2022	0.051%	182.50	155.00	12.73	350.23	0.18
Greenup County	Check	646,121.76	1/1/2021	12/31/2021	2/22/2022	2/22/2022	4.315%	182.50	53.00	12.73	248.23	10.71
Harris County	Check	17,423.02	1/1/2021	12/31/2021	2/20/2022	2/20/2022	0.116%	182.50	51.00	12.73	246.23	0.29
Henry County	Check	13,878.05	1/1/2021	12/31/2021	2/16/2022	2/16/2022	0.093%	182.50	47.00	12.73	242.23	0.22
Knott County	Check	615,211.26	1/1/2021	12/31/2021	2/21/2022	2/21/2022	4.108%	182.50	52.00	12.73	247.23	10.16
Owen County	Check	57,490.43	1/1/2021	12/31/2021	2/20/2022	2/20/2022	0.384%	182.50	51.00	12.73	246.23	0.95
Pendleton County	Check	37,501.37	1/1/2021	12/31/2021	2/25/2022	2/25/2022	0.250%	182.50	56.00	12.73	251.23	0.63
Robertson County	Check	33,070.56	1/1/2021	12/31/2021	2/16/2022	2/16/2022	0.221%	182.50	47.00	12.73	242.23	0.53
Rowan County	Check	50,334.58	1/1/2021	12/31/2021	2/28/2022	2/28/2022	0.336%	182.50	59.00	12.73	254.23	0.85
City of Wheelwright	Check	3,687.39	1/1/2021	12/31/2021	3/27/2022	3/27/2022	0.025%	182.50	86.00	12.73	281.23	0.07
City of Allen	Check	1,355.16	1/1/2021	12/31/2021	9/1/2021	9/1/2021	0.009%	182.50	(121.00)	12.73	74.23	0.01
Bell County	Check	2,478.75	1/1/2021	12/31/2021	2/23/2022	2/23/2022	0.017%	182.50	54.00	12.73	249.23	0.04
Carroll County	Check	10,776.16	1/1/2021	12/31/2021	3/20/2022	3/20/2022	0.072%	182.50	79.00	12.73	274.23	0.20
Carter County	Check	262,442.46	1/1/2021	12/31/2021	2/28/2022	2/28/2022	1.753%	182.50	59.00	12.73	254.23	4.46
Floyd County	Check	1,011,673.65	1/1/2021	12/31/2021	4/26/2022	4/26/2022	6.756%	182.50	116.00	12.73	311.23	21.03
Franklin County	Check	513.77	1/1/2021	12/31/2021	4/15/2022	4/15/2022	0.003%	182.50	105.00	12.73	300.23	0.01
Leslie County	Check	458,263.34	1/1/2021	12/31/2021	3/18/2022	3/18/2022	3.060%	182.50	77.00	12.73	272.23	8.33
Lewis County	Check	124,825.49	1/1/2021	12/31/2021	2/22/2022	2/22/2022	0.834%	182.50	53.00	12.73	248.23	2.07
Mason County	Check	51,901.58	1/1/2021	12/31/2021	2/23/2022	2/23/2022	0.347%	182.50	54.00	12.73	249.23	0.86
Morgan County	Check	85,965.78	1/1/2021	12/31/2021	2/24/2022	2/24/2022	0.574%	182.50	55.00	12.73	250.23	1.44
City of Paintsville	Check	90,133.84	1/1/2021	12/31/2021	3/8/2022	3/8/2022	0.602%	182.50	67.00	12.73	262.23	1.58
Pikeville Independent Schools	Check	102,486.81	1/1/2021	12/31/2021	3/13/2022	3/13/2022	0.684%	182.50	72.00	12.73	267.23	1.83
City of Prestonsburg	Check	20,235.42	1/1/2021	12/31/2021	3/11/2022	3/11/2022	0.135%	182.50	70.00	12.73	265.23	0.36
City of Wurtland	Check	10,457.63	1/1/2021	12/31/2021	2/28/2022	2/28/2022	0.070%	182.50	59.00	12.73	254.23	0.18
Clay County	Check	10,834.51	1/1/2021	12/31/2021	3/18/2022	3/18/2022	0.072%	182.50	77.00	12.73	272.23	0.20
Grant County	Check	43,382.84	1/1/2021	12/31/2021	2/22/2022	2/22/2022	0.290%	182.50	53.00	12.73	248.23	0.72
City of South Shore	Check	2,546.27	1/1/2021	12/31/2021	2/22/2022	2/22/2022	0.017%	182.50	53.00	12.73	248.23	0.04
Trimble County	Check	47,978.29	1/1/2021	12/31/2021	10/31/2021	10/31/2021	0.320%	182.50	(61.00)	12.73	134.23	0.43
City of West Liberty	Check	3,437.98	1/1/2021	12/31/2021	2/28/2022	2/28/2022	0.023%	182.50	59.00	12.73	254.23	0.06
City of Worthington	Check	9,785.89	1/1/2021	12/31/2021	2/24/2022	2/24/2022	0.065%	182.50	55.00	12.73	250.23	0.16
Kentucky State	Check	9,665.44	1/1/2021	12/31/2021	3/8/2022	3/8/2022	0.065%	182.50	67.00	12.73	262.23	0.17
Kentucky State	Check	4,408,803.13	1/1/2021	12/31/2021	2/14/2022	2/14/2022	29.441%	182.50	45.00	12.73	240.23	70.73
City of Hazard	Check	2,980.56	1/1/2022	12/31/2022	9/30/2021	9/30/2021	0.020%	182.50	(457.00)	12.73	(261.77)	(0.05)
		$ 14,975,092.67										264.85

Federal Unemployment Taxes

Payee	Method of Payment	Amount	Period Beginning	Period Ending	Due Date	Payment Date	Weighting Factor	Service Lead	Payment Lead	Float	Total Lead	Weighted Lead
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)
Internal Revenue Service	EFT	909.55	10/1/2021	12/31/2021	1/31/2022	1/31/2022	4.013%	46.00	31.00		77.00	3.09
Internal Revenue Service	EFT	19,773.15	1/1/2022	3/31/2022	4/30/2022	4/30/2022	87.242%	45.00	30.00		75.00	65.43
Internal Revenue Service	EFT	594.65	4/1/2022	6/30/2022	7/31/2022	7/31/2022	2.624%	45.50	31.00		76.50	2.01
Internal Revenue Service	EFT	1,387.39	7/1/2022	9/30/2022	10/31/2022	10/31/2022	6.121%	46.00	31.00		77.00	4.71
		$ 22,664.74										75.24

State Unemployment Taxes - Kentucky

Payee	Method of Payment	Amount	Period Beginning	Period Ending	Due Date	Payment Date	Weighting Factor	Service Lead	Payment Lead	Float	Total Lead	Weighted Lead
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)
Kentucky Department of Revenue	EFT	$ 247.71	10/1/2021	12/31/2021	1/31/2022	1/31/2022	2.357%	46.00	31.00		77.00	1.81
Kentucky Department of Revenue	EFT	9,342.21	1/1/2022	3/31/2022	4/30/2022	4/30/2022	88.885%	45.00	30.00		75.00	66.66
Kentucky Department of Revenue	EFT	340.06	4/1/2022	6/30/2022	7/31/2022	7/31/2022	3.235%	45.50	31.00		76.50	2.48
Kentucky Department of Revenue	EFT	580.49	7/1/2022	9/30/2022	10/31/2022	10/31/2022	5.523%	46.00	31.00		77.00	4.25
		$ 10,510.47										75.21

State Unemployment Taxes - West Virginia

Payee	Method of Payment	Amount	Period Beginning	Period Ending	Due Date	Payment Date	Weighting Factor	Service Lead	Payment Lead	Float	Total Lead	Weighted Lead
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)
West Virginia Department of Revenue	EFT	1,991.31	10/1/2021	12/31/2021	1/31/2022	1/31/2022	6.742%	46.00	31.00		77.00	5.19
West Virginia Department of Revenue	EFT	24,829.79	1/1/2022	3/31/2022	4/30/2022	4/30/2022	84.069%	45.00	30.00		75.00	63.05
West Virginia Department of Revenue	EFT	621.29	4/1/2022	6/30/2022	7/31/2022	7/31/2022	2.104%	45.50	31.00		76.50	1.61
West Virginia Department of Revenue	EFT	2,092.73	7/1/2022	9/30/2022	10/31/2022	10/31/2022	7.086%	46.00	31.00		77.00	5.46
		$ 29,535.12										75.31

Note: For taxes other than income taxes, all payment dates included reflect the date which payment was du

KENTUCKY POWER COMPANY
LEAD LAG STUDY
INTEREST EXPENSE

Weighted Lead Time: 82.05 days

Note	Total	Period Beginning	Period Ending	Midpoint of Service Period	Weighting Factor	Weighted Lead Time
(A)	(B)	(C)	(D)	(E)	(F)	(G)
$125M Bank Term Loan	77,083.33	9/20/2021	10/20/2021	15.50	0.153%	0.02
$75M Bank Term Loan	332,979.17	7/30/2021	10/29/2021	46.00	0.663%	0.30
$125M Bank Term Loan	84,791.67	10/20/2021	11/22/2021	17.00	0.169%	0.03
$75M Bank Term Loan	106,000.00	10/29/2021	11/30/2021	16.50	0.211%	0.03
$150M Bank Term Loan	348,833.33	9/17/2021	12/17/2021	46.00	0.694%	0.32
$125M Bank Term Loan	78,125.00	11/22/2021	12/22/2021	15.50	0.155%	0.02
$75M Bank Term Loan	103,333.33	11/30/2021	12/31/2021	16.00	0.206%	0.03
$150M Bank Term Loan	121,333.34	12/17/2021	1/18/2022	16.50	0.241%	0.04
$125M Bank Term Loan	87,083.33	12/22/2021	1/24/2022	17.00	0.173%	0.03
$75M Bank Term Loan	103,979.17	12/31/2021	1/31/2022	16.00	0.207%	0.03
$125M Bank Term Loan	81,805.56	1/24/2022	2/24/2022	16.00	0.163%	0.03
$125M Bank Term Loan	34,305.56	2/24/2022	3/7/2022	6.00	0.068%	0.00
$150M Bank Term Loan	394,333.33	1/18/2022	4/19/2022	46.00	0.785%	0.36
$75M Bank Term Loan	330,000.00	1/31/2022	4/29/2022	44.50	0.657%	0.29
$125M Bank Term Loan	386,406.39	3/7/2022	6/7/2022	46.50	0.769%	0.36
$150M Bank Term Loan	701,458.33	4/19/2022	7/19/2022	46.00	1.396%	0.64
$75M Bank Term Loan	519,458.33	4/29/2022	7/29/2022	46.00	1.034%	0.48
$125M Bank Term Loan	717,980.52	6/7/2022	9/7/2022	46.50	1.429%	0.66
$75M Bank Term Loan	153,583.33	7/29/2022	8/31/2022	17.00	0.306%	0.05
WV Economic Dev. Authority, Series 2014A (Mitchell)	763,750.00	5/4/2021	11/1/2021	91.00	1.520%	1.38
Senior Notes (Public)	2,109,375.00	6/3/2021	12/1/2021	91.00	4.198%	3.82
Senior Notes (Private Placement)	1,204,500.00	6/22/2021	12/20/2021	91.00	2.397%	2.18
Senior Notes (Private Placement)	2,439,000.00	6/22/2021	12/20/2021	91.00	4.854%	4.42
Senior Notes (Private Placement)	1,732,000.00	7/2/2021	12/30/2021	91.00	3.447%	3.14
Senior Notes (Private Placement)	1,017,250.00	9/14/2021	3/14/2022	91.00	2.024%	1.84
Senior Notes (Private Placement)	670,000.00	9/14/2021	3/14/2022	91.00	1.333%	1.21
Senior Notes (Private Placement)	2,846,250.00	9/14/2021	3/14/2022	91.00	5.664%	5.15
Senior Notes (Private Placement)	1,133,000.00	9/14/2021	3/14/2022	91.00	2.255%	2.05
Senior Notes (Private Placement)	2,508,000.00	9/30/2021	3/30/2022	91.00	4.991%	4.54
WV Economic Dev. Authority, Series 2014A (Mitchell)	763,750.00	11/2/2021	5/2/2022	91.00	1.520%	1.38
Senior Notes (Public)	2,109,375.00	12/2/2021	6/1/2022	91.00	4.198%	3.82
Senior Notes (Private Placement)	1,204,500.00	12/22/2021	6/21/2022	91.00	2.397%	2.18
Senior Notes (Private Placement)	2,439,000.00	12/22/2021	6/21/2022	91.00	4.854%	4.42
Senior Notes (Private Placement)	1,732,000.00	12/31/2021	6/30/2022	91.00	3.447%	3.14
Senior Notes (Private Placement)	1,017,250.00	3/15/2022	9/12/2022	91.00	2.024%	1.84
Senior Notes (Private Placement)	670,000.00	3/15/2022	9/12/2022	91.00	1.333%	1.21
Senior Notes (Private Placement)	2,846,250.00	3/15/2022	9/12/2022	91.00	5.664%	5.15
Senior Notes (Private Placement)	1,133,000.00	3/15/2022	9/12/2022	91.00	2.255%	2.05
Senior Notes (Private Placement)	2,508,000.00	4/2/2022	9/30/2022	91.00	4.991%	4.54
$150M Bank Term Loan	1,357,000.00	7/19/2022	10/19/2022	46.50	2.700%	1.26
$75M Bank Term Loan - Draw 1	674,220.90	7/22/2022	10/24/2022	47.50	1.342%	0.64
WV Economic Dev. Authority, Series 2014A (Mitchell)	763,750.00	5/4/2021	11/1/2021	91.00	1.520%	1.38
$75M Bank Term Loan - Draw 2	755,603.33	8/12/2022	11/14/2022	47.50	1.504%	0.71
Senior Notes (Public)	2,109,375.00	12/2/2021	6/1/2022	91.00	4.198%	3.82
$125M Bank Term Loan	1,294,493.96	9/7/2022	12/7/2022	46.00	2.576%	1.18
$75M Bank Term Loan - Draw 2	302,862.50	11/14/2022	12/14/2022	15.50	0.603%	0.09
Senior Notes (Private Placement)	1,204,500.00	6/22/2021	12/20/2021	91.00	2.397%	2.18
Senior Notes (Private Placement)	2,439,000.00	6/22/2021	12/20/2021	91.00	4.854%	4.42
Senior Notes (Private Placement)	1,732,000.00	12/31/2021	6/30/2022	91.00	3.447%	3.14
$125M Bank Term Loan	8,757.95	12/28/2022	12/29/2022	1.00	0.017%	0.00
	50,250,686.66					82.05

KENTUCKY POWER COMPANY
LEAD LAG STUDY
FEDERAL & STATE INCOME TAX

Federal Income Tax

Payment	Period Beginning	Period Ending	Payment Date	Tax Due Date	Service Lead Time	Payment Lead Time	Total	Weighting Factor	Weighted Lead
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)
2021 Q4 FEDERAL ESTIMATE PAYABLE	10/1/2021	12/31/2021	12/15/2021	12/15/2021	46.00	(16.00)	30.00	25%	7.50
2022 Q1 FEDERAL ESTIMATE PAYABLE	1/1/2022	3/31/2022	4/15/2022	4/15/2022	45.00	15.00	60.00	25%	15.00
2022 Q2 FEDERAL ESTIMATE PAYABLE	4/1/2022	6/30/2022	6/15/2022	6/15/2022	45.50	(15.00)	30.50	25%	7.63
2022 Q3 FEDERAL ESTIMATE PAYABLE	7/1/2022	9/30/2022	9/15/2022	9/15/2022	46.00	(15.00)	31.00	25%	7.75
									37.88

State Income Tax

Payment	Period Beginning	Period Ending	Payment Date	Tax Due Date	Service Lead Time	Payment Lead Time	Total	Weighting Factor	Weighted Lead
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)
2021 Q4 STATE ESTIMATE PAYABLE	10/1/2021	12/31/2021	12/15/2021	12/15/2021	46.00	(16.00)	30.00	25%	7.50
2022 Q1 STATE ESTIMATE PAYABLE	1/1/2022	3/31/2022	4/15/2022	4/15/2022	45.00	15.00	60.00	25%	15.00
2022 Q2 STATE ESTIMATE PAYABLE	4/1/2022	6/30/2022	6/15/2022	6/15/2022	45.50	(15.00)	30.50	25%	7.63
2022 Q3 STATE ESTIMATE PAYABLE	7/1/2022	9/30/2022	9/15/2022	9/15/2022	46.00	(15.00)	31.00	25%	7.75
									37.88

KENTUCKY POWER COMPANY
LEAD LAG STUDY
INTERCOMPANY TRANSACTIONS

Weighted Lead Time: 18.21 days

Service Start Date	Service End Date	Payment Date	Payment Amount	Service Lead Time	Processing Lead Time	Total Unweighted Lead Time	Weighting Factor	Weighted Lead Time
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
10/1/2021	10/31/2021	11/3/2021	$ 100,738.40	15.50	3.00	18.50	0.121%	0.02
11/1/2021	11/30/2021	12/3/2021	114,090.95	15.00	3.00	18.00	0.137%	0.02
12/1/2021	12/31/2021	1/5/2022	217,018.64	15.50	5.00	20.50	0.261%	0.05
1/1/2022	1/31/2022	2/2/2022	118,740.40	15.50	2.00	17.50	0.143%	0.02
2/1/2022	2/28/2022	3/3/2022	99,903.38	14.00	3.00	17.00	0.120%	0.02
3/1/2022	3/31/2022	4/4/2022	110,902.05	15.50	4.00	19.50	0.133%	0.03
4/1/2022	4/30/2022	5/3/2022	87,540.90	15.00	3.00	18.00	0.105%	0.02
5/1/2022	5/31/2022	6/2/2022	116,453.28	15.50	2.00	17.50	0.140%	0.02
6/1/2022	6/30/2022	7/5/2022	73,768.55	15.00	5.00	20.00	0.089%	0.02
7/1/2022	7/31/2022	8/3/2022	184,545.39	15.50	3.00	18.50	0.222%	0.04
8/1/2022	8/31/2022	9/6/2022	2,333,223.58	15.50	6.00	21.50	2.803%	0.60
9/1/2022	9/30/2022	10/5/2022	120,212.32	15.00	5.00	20.00	0.144%	0.03
10/1/2021	10/31/2021	11/3/2021	109,295.05	15.50	3.00	18.50	0.131%	0.02
11/1/2021	11/30/2021	12/3/2021	128,649.94	15.00	3.00	18.00	0.155%	0.03
12/1/2021	12/31/2021	1/5/2022	172,672.34	15.50	5.00	20.50	0.207%	0.04
1/1/2022	1/31/2022	2/2/2022	2,121,720.54	15.50	2.00	17.50	2.549%	0.45
2/1/2022	2/28/2022	3/3/2022	85,494.13	14.00	3.00	17.00	0.103%	0.02
3/1/2022	3/31/2022	4/4/2022	61,810.76	15.50	4.00	19.50	0.074%	0.01
4/1/2022	4/30/2022	5/3/2022	9,282.61	15.00	3.00	18.00	0.011%	0.00
5/1/2022	5/31/2022	6/2/2022	21,977.43	15.50	2.00	17.50	0.026%	0.00
6/1/2022	6/30/2022	7/5/2022	298,462.03	15.00	5.00	20.00	0.359%	0.07
7/1/2022	7/31/2022	8/3/2022	203,575.92	15.50	3.00	18.50	0.245%	0.05
8/1/2022	8/31/2022	9/6/2022	315,563.37	15.50	6.00	21.50	0.379%	0.08
9/1/2022	9/30/2022	10/5/2022	21,252.23	15.00	5.00	20.00	0.026%	0.01
10/1/2021	10/31/2021	11/3/2021	71,768.24	15.50	3.00	18.50	0.086%	0.02
11/1/2021	11/30/2021	12/3/2021	33,622.66	15.00	3.00	18.00	0.040%	0.01
12/1/2021	12/31/2021	1/5/2022	16,196.42	15.50	5.00	20.50	0.019%	0.00
1/1/2022	1/31/2022	2/2/2022	18,346.49	15.50	2.00	17.50	0.022%	0.00
2/1/2022	2/28/2022	3/3/2022	76,944.41	14.00	3.00	17.00	0.092%	0.02
4/1/2022	4/30/2022	5/3/2022	38,383.60	15.00	3.00	18.00	0.046%	0.01
5/1/2022	5/31/2022	6/2/2022	48,969.25	15.50	2.00	17.50	0.059%	0.01
6/1/2022	6/30/2022	7/5/2022	218,913.06	15.00	5.00	20.00	0.263%	0.05
7/1/2022	7/31/2022	8/3/2022	46,912.42	15.50	3.00	18.50	0.056%	0.01
8/1/2022	8/31/2022	9/6/2022	37,969.02	15.50	6.00	21.50	0.046%	0.01
9/1/2022	9/30/2022	10/5/2022	42,538.35	15.00	5.00	20.00	0.051%	0.01
10/1/2021	10/31/2021	11/2/2021	1,950,399.05	15.50	2.00	17.50	2.343%	0.41
11/1/2021	11/30/2021	12/2/2021	2,018,435.55	15.00	2.00	17.00	2.425%	0.41
12/1/2021	12/31/2021	1/4/2022	2,367,026.89	15.50	4.00	19.50	2.843%	0.55
1/1/2022	1/31/2022	2/2/2022	1,959,890.58	15.50	2.00	17.50	2.354%	0.41
2/1/2022	2/28/2022	3/2/2022	1,639,225.13	14.00	2.00	16.00	1.969%	0.32
3/1/2022	3/31/2022	4/4/2022	1,722,291.00	15.50	4.00	19.50	2.069%	0.40
4/1/2022	4/30/2022	5/3/2022	1,795,137.54	15.00	3.00	18.00	2.156%	0.39
5/1/2022	5/31/2022	6/2/2022	1,603,648.54	15.50	2.00	17.50	1.926%	0.34
6/1/2022	6/30/2022	7/5/2022	2,230,558.68	15.00	5.00	20.00	2.679%	0.54
7/1/2022	7/31/2022	8/2/2022	2,074,289.60	15.50	2.00	17.50	2.492%	0.44
8/1/2022	8/31/2022	9/2/2022	2,557,604.87	15.50	2.00	17.50	3.072%	0.54
9/1/2022	9/30/2022	10/4/2022	2,983,061.20	15.00	4.00	19.00	3.583%	0.68
10/1/2021	10/31/2021	11/2/2021	1,936,217.96	15.50	2.00	17.50	2.326%	0.41
11/1/2021	11/30/2021	12/2/2021	2,860,772.26	15.00	2.00	17.00	3.436%	0.58
12/1/2021	12/31/2021	1/4/2022	2,765,436.25	15.50	4.00	19.50	3.322%	0.65
1/1/2022	1/31/2022	2/2/2022	2,772,243.60	15.50	2.00	17.50	3.330%	0.58
2/1/2022	2/28/2022	3/2/2022	2,171,965.95	14.00	2.00	16.00	2.609%	0.42
3/1/2022	3/31/2022	4/4/2022	2,696,627.80	15.50	4.00	19.50	3.239%	0.63
4/1/2022	4/30/2022	5/3/2022	2,549,455.45	15.00	3.00	18.00	3.062%	0.55
5/1/2022	5/31/2022	6/2/2022	2,420,026.10	15.50	2.00	17.50	2.907%	0.51
6/1/2022	6/30/2022	7/5/2022	3,065,636.63	15.00	5.00	20.00	3.683%	0.74
7/1/2022	7/31/2022	8/2/2022	2,248,075.82	15.50	2.00	17.50	2.700%	0.47
8/1/2022	8/31/2022	9/2/2022	3,014,028.77	15.50	2.00	17.50	3.621%	0.63
9/1/2022	9/30/2022	10/4/2022	1,333,905.76	15.00	4.00	19.00	1.602%	0.30
10/1/2021	10/31/2021	11/2/2021	1,697,004.43	15.50	2.00	17.50	2.039%	0.36
11/1/2021	11/30/2021	12/2/2021	1,833,230.99	15.00	2.00	17.00	2.202%	0.37
12/1/2021	12/31/2021	1/4/2022	1,691,579.14	15.50	4.00	19.50	2.032%	0.40
1/1/2022	1/31/2022	2/2/2022	2,038,698.48	15.50	2.00	17.50	2.449%	0.43
2/1/2022	2/28/2022	3/2/2022	1,830,164.16	14.00	2.00	16.00	2.198%	0.35
3/1/2022	3/31/2022	4/4/2022	1,925,396.00	15.50	4.00	19.50	2.313%	0.45
4/1/2022	4/30/2022	5/3/2022	1,531,016.73	15.00	3.00	18.00	1.839%	0.33
5/1/2022	5/31/2022	6/2/2022	1,610,954.01	15.50	2.00	17.50	1.935%	0.34
6/1/2022	6/30/2022	7/5/2022	1,754,565.46	15.00	5.00	20.00	2.108%	0.42
7/1/2022	7/31/2022	8/2/2022	1,175,772.27	15.50	2.00	17.50	1.412%	0.25
8/1/2022	8/31/2022	9/2/2022	1,672,938.68	15.50	2.00	17.50	2.010%	0.35
9/1/2022	9/30/2022	10/4/2022	1,872,858.54	15.00	4.00	19.00	2.250%	0.43
			$ 83,247,597.98					18.21