STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

PETITION OF THE CITY OF CRAWFORDSVILLE, INDIANA, BY AND THROUGH ITS MUNICIPAL ELECTRIC UTILITY, CRAWFORDSVILLE ELECTRIC LIGHT AND POWER, FOR APPROVAL OF A NEW SCHEDULE OF RATES AND CHARGES FOR ELECTRIC SERVICE AND FOR APPROVAL TO MODIFY ITS ENERGY COST ADJUSTMENT PROCEDURES	)	**CAUSE NO. 45420**

PRE-FILED VERIFIED SETTLEMENT TESTIMONY OF

THOMAS A. GHIDOSSI, P.E.

AND ATTACHMENT TAG-3

ON BEHALF OF PETITIONER

CRAWFORDSVILLE ELECTRIC LIGHT AND POWER

PETITIONER'S EXHIBIT NO. 10

JANUARY 27, 2021

Respectfully Submitted,

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I. INTRODUCTION

Q1. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Thomas A. Ghidossi. My business address is 2950 East Harmony Road, Suite 265, Fort Collins, Colorado 80528.

Q2. ARE YOU THE SAME THOMAS A. GHIDOSSI WHO PREVIOUSLY FILED DIRECT TESTIMONY IN THIS PROCEEDING ON BEHALF OF THE CITY OF CRAWFORDSVILLE, INDIANA ("CRAWFORDSVILLE" OR THE "CITY") AND CRAWFORDSVILLE ELECTRIC LIGHT & POWER ("CEL&P" OR THE "UTILITY")?

A. Yes.

Q3. DO YOU HAVE ANY UPDATES TO YOUR QUALIFICATIONS FROM THAT PREVIOUS TESTIMONY?

A. Yes. I am now licensed as a Professional Engineer (Electrical) in the State of Indiana.

Q4. WHAT ATTACHMENTS ARE YOU SPONSORING IN THIS SETTLEMENT TESTIMONY?

A. The attachments to my settlement testimony include:

- Attachment TAG-3: Crawfordsville Electric Light & Power Contract Vegetation Management Estimate

Q5. WHAT WORKPAPERS ARE YOU SPONSORING IN THIS CAUSE?

A. I am submitting workpapers providing support for the proposed Vegetation Management expenses from 2021-2026.

Q6. WERE THESE EXHIBITS, ATTACHMENTS AND WORKPAPERS PREPARED BY YOU OR UNDER YOUR SUPERVISION?

A. Yes.

Q7. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I will discuss key terms pertaining to Vegetation Management ("VM") and the revenue requirement to fund the Capital Improvement Plan ("CIP") in the Stipulation and Settlement Agreement ("Settlement") between CEL&P and the Indiana Office of the Utility Consumer Counselor ("OUCC").

Q8. PLEASE PROVIDE AN OVERVIEW OF YOUR TESTIMONY AND RECOMMENDATONS.

A. My testimony explains (1) my estimate prepared to settle the issue of the cost of contract Vegetation Management from 2021-2026, and (2) CEL&P's settled annual revenue requirement component intended to support the CIP. Ultimately, I conclude that CEL&P's as-settled contract Vegetation Management costs are reasonable and necessary, and that the CIP revenue requirement requested by CEL&P is necessary and reasonable to properly fund the full CIP. I recommend that both of these components, as integral parts of the Settlement, be approved by the Commission.

II. CONTRACT VEGETATION MANAGEMENT

Q9. PLEASE DESCRIBE THE SETTLEMENT WITH RESPECT TO THE VEGETATION MANAGEMENT REVENUE REQUIREMENT.

A. In Jennifer Wilson's Direct Testimony (pp. 12 and 29), the Utility included $660,000 as an adjustment to operating expenses to support VM. The Settling Parties agreed to $558,510 in annual funding for vegetation management contract costs.

Q10. PLEASE PROVIDE AN OVERVIEW OF THE CONTRACT VEGETATION MANAGEMENT PROGRAM.

A. In 2018, CEL&P was provided a proposal for vegetation management by a qualified contractor, Plant Growth Management Services ("PGMS"), which OUCC Witness Eckert included as his Attachment MDE-2. However, CEL&P was not able to implement the planned program due to fiscal constraints related to the loss of revenues due to the 2016 rate design mathematical error. While CEL&P is currently on a seven-year vegetation management program, the Utility is behind and needs to catch up. As indicated in the PGMS proposal, the transition to a three-year cycle for the CEL&P distribution system is recommended. CELP's transmission system vegetation management plan was also unrealized due to fiscal constraints. In the case of transmission, a two-year plan was proposed by PGMS in order to address the more critical needs of a transmission system.

Q11. IN YOUR OPINION, IS A THREE-YEAR VEGETATION MANAGEMENT CYCLE FOR DISTRIBUTION LINES AND A TWO-YEAR VEGETATION MANAGEMENT CYCLE FOR TRANSMISSION LINES REASONABLE?

A. Yes. Vegetation management around overhead electric lines is critical to reducing outages and improving reliability of electric service. More tree-related outages occur when there are more years in a cycle. I believe a three-year VM cycle for distribution lines and a two-year VM cycle for transmission lines are reasonable for CEL&P.

Q12. WHY ARE YOU PROVIDING A MORE SPECIFIC ESTIMATE FOR THE VEGETATION MANAGEMENT COST ADJUSTMENT?

A. The 2018 PGMS proposal is three years old, and the vegetation on CEL&P's system has continued to grow while the Utility fell further and further behind on tree trimming. CEL&P asked me to provide an updated analysis of Total Predicted Six-Year Contract Maintenance Costs for both Distribution and Transmission for 2021-2026, based upon the information provided in the 2018 Audit.

Q13. PLEASE EXPLAIN HOW YOU DEVELOPED THE ANNUAL ESTIMATED COSTS FOR THE 2021-2026 CONTRACT VEGETATION MANAGEMENT PROGRAM.

A. As indicated in Attachment TAG-3, I utilized the 2018 PGMS proposal for contract vegetation management for the distribution and transmission systems as the base for determining projected costs for a new 2021-2026 VM plan. First, I adopted a three-year distribution cycle as recommended, and a two-year transmission cycle. Then I modified the PGMS estimates by several factors to establish the future annual costs. Finally, I totaled up the 2021-2026 planned expenditure and divided by six years to determine average annual contract vegetation management costs.

Q14. WHAT FACTORS DID YOU USE TO MODIFY THE PGMS PROPOSAL IN ORDER TO PREPARE YOUR ESTIMATE FOR EACH YEAR?

A. I used five factors: (1) annual escalation for contract vegetation management; (2) CEL&P's actual distribution and transmission system miles versus PGMS's estimate in its proposal; (3) cost savings as proposed by PGMS for a consistent year-over-year distribution maintenance plan; (4) CEL&P's actual contract vegetation management expenditures for 2019 and 2020; and (5) the aging factor provided by PGMS to account for each year in which maintenance is delayed.

Q15. HOW DID YOU DETERMINE AND APPLY THE ANNUAL ESCALATION FACTOR FOR CONTRACT VEGETATION MANAGEMENT?

A. I researched prior annual cost indices from the Bureau of Labor Statistics to establish what I believe is an appropriate annual escalation factor of 1.9%.[1] I applied the annual escalation to the PGMS 2018 quoted pricing to obtain projected costs for 2021-2026.

[1] NAICS 561730 Landscaping Services, Labor Code 37-3013 Tree Trimmers and Pruners, May 2019 http://www.bls.gov/oes/current/naics5_561730.htm (accessed January 21, 2021).

Q16. WHAT WAS THE DIFFERENCE BETWEEN CEL&P'S ACTUAL DISTRIBUTION AND TRANSMISSION MILES AND PGMS'S QUOTE, AND HOW DID YOU ACCOUNT FOR THAT DIFFERENCE?

A. CEL&P presently has 271.4 miles of overhead distribution lines and 13.34 miles of overhead transmission lines. PGMS's quote estimated 230 miles of overhead distribution lines and 18 miles of overhead transmission lines. I established correction factors to apply to PGMS's quoted prices of 118% for distribution and 74% for transmission. As a result, the quoted pricing for CEL&P's distribution system VM was increased by 18% and the quoted pricing for CEL&P's transmission system was reduced by 26% to more properly reflect the actual work that will be required.

Q17. HOW DID YOU APPLY THE COST SAVINGS DESCRIBED BY PGMS FOR A CONSISTENT YEAR-OVER-YEAR PLAN?

A. PGMS described a cost saving of 30% for the second 3-year Distribution Maintenance Schedule if it followed directly on a prior, completed 3-year program (see OUCC Attachment MDE-2, p. 3). This savings was applied to the proposed 2024-2026 costs for distribution maintenance.

Q18. HOW DID YOU UTILIZE CEL&P'S PRIOR CONTRACT VEGETATION MANAGEMENT EXPENDITURES FOR 2019-2020 IN YOUR ESTIMATING PROCESS?

A. I used the prior contract expenses to develop an approximation for how much distribution and transmission maintenance was performed in 2019 and 2020 by comparing the expenditures with PGMS's estimates of a full program of vegetation management for those years. The analysis results were that 46% of contract maintenance was performed on the distribution system and 9% on the transmission system.

Q19. HOW DID YOU APPLY THE AGING FACTOR FOR DELAYED MAINTENANCE?

A. PGMS described a 3.5% "Aging Factor" that would apply for each year that maintenance was delayed (*Id.*). I applied that factor to the delayed distribution and transmission maintenance factors to increase the pricing of the first maintenance periods to make up for the delayed maintenance. As a result, the base cost of distribution maintenance for the 2021-2023 period increased by 1.9%, and the base cost of transmission maintenance for the 2021-2022 period increased by 3.2%.

Q20. WHAT IS THE FINAL FIGURE YOU CAME TO FOR THE AVERAGE ANNUAL COST FOR CONTRACT MAINTENANCE?

A. Using all of these factors and implementing two three-year distribution cycles and three-two-year transmission cycles, the average annual cost for contract maintenance over the 2021-2026 period would be $558,510.

Q21. DOES THIS FIGURE INCLUDE ANY IN-HOUSE VM EXPENSES?

A. No, it does not.

Q22. WOULD YOU EXPECT CEL&P TO CONTINUE TO HAVE IN-HOUSE VM EXPENSES EVEN IF A FULL CONTRACT VM PROGRAM WAS IMPLEMENTD?

A. Yes. In my experience, contractors are typically assigned set areas or line sections for work and are most efficient when performing the work from start to finish in the area or section. When the need for VM work at individual locations arises, for example, a broken tree branch or a tree-vehicle interaction, asking a contract crew to stop their work and address the single issue is very inefficient and would carry a significant cost adder to CEL&P. It is also my understanding that the VM contract would not cover tree trimming in response to storms. Therefore, I expect that CEL&P's in-house vegetation management personnel and/or

linemen would be the best means of dealing with tree trimming related to broken branches, accidents and storms.

III. CAPITAL IMPROVEMENT PLAN REVENUE REQUIREMENT

Q23. PLEASE DESCRIBE THE SETTLEMENT REVENUE REQUIREMENT WITH RESPECT TO THE CAPITAL IMPROVEMENT PLAN?

A. In Ms. Wilson's Direct Testimony, the Utility requested an annual revenue requirement to fund its Capital Improvement Plan of $4,432,804 (Wilson Direct, p. 13). Through negotiations, the Settling Parties agreed to an annual revenue requirement to fund the CIP of $4,029,822. This amount funds the total 2021-2026 CIP of $22,164,022.

Q24. HOW WILL THE CAPITAL PROJECTS EXPECTED TO BEGIN IN 2021 BE FUNDED WHILE THIS CASE IS PENDING?

A. In its original proposal, and in the Settlement, CEL&P proposed to fund the 2021 CIP projects in the amount of $1,142,609 from the current balance in its Depreciation Fund. This was largely due to the timing of when a Final Order from the Commission is expected in this Cause. The revenue increase was not likely to begin to flow to the Utility through customer bills until the second half of 2021. In order to keep the CIP projects on track, CEL&P must begin to execute that plan now, while this case is still pending. The only funds CEL&P has available for this purpose are in its Depreciation Fund.

Q25. WHAT WAS THE NATURE OF THE ADJUSTMENT TO THE CAPITAL IMPROVEMENT PLAN IN THE AS-SETTLED REVENUE REQUIREMENT?

A. CEL&P's original CIP funding proposal was determined by dividing the 2022-2026 components of its CIP budget of $22,164,022 by 5 years, equaling 4,432,804. The remainder of the CIP for years 2022 through 2026 will be funded by the revenue contribution from the

new rates. CEL&P anticipates that its new rates will go into effect late in the third quarter of 2021; therefore, the revenue contribution for the balance of CIP projects ($22,164,022) will occur over approximately 5.5 years. The proposed annual revenue requirement for settlement was derived by dividing the total $22,164,022 by 5.5 years equaling $4,029,822.

Q26. DID THE OUCC PROVIDE ANY TESTIMONY REGARDING THE COMPONENTS OF THE CAPITAL IMPROVEMENT PLAN?

A. Yes. Witness Anthony A. Alvarez stated in his Direct Testimony that he did not recommend any line-item adjustments to CEL&P's 2021-2026 CIP. (Alvarez Direct, p. 2).

IV. SUMMARY AND CONCLUSION

Q27. ARE THE VM AND CIP AMOUNTS IN THE SETTLEMENT AGREEMENT FAIR, REASONABLE, AND IN THE PUBLIC INTEREST?

A. Yes. The terms agreed to in this Settlement with respect to the VM and CIP reflect a compromise that achieves a desirable and beneficial outcome for CEL&P and its customers. The Settlement terms allow CEL&P to collect sufficient revenue to perform appropriate VM and fund the CIP over the course of the next six years.

Q28. WHAT ARE YOUR RECOMMENDATIONS?

A. I recommend that the Settlement Agreement terms for Vegetation Management and the Capital Improvement Plan revenue requirements be accepted and approved. While my settlement testimony is limited to the VM and CIP terms, I participated in all of the settlement negotiation sessions with the OUCC, and observed good faith negotiations and reasonable resolutions from both sides on all of the issues in the case.

Q29. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

VERIFICATION

I affirm under the penalties of perjury that the foregoing Prefiled Verified Settlement Testimony is true to the best of my knowledge, information and belief as of the date here filed.

Thomas A. Ghidossi, P.E.

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Crawfordsville Electric Light & Power
Contract Vegetation Management
T. Ghidossi, P.E.

Assumed Annual Inflation Escalation for Contract Vegetation Maintenance	1.9%	NAICS 561730 Landscaping Services, Labor Code 37-3013 Tree Trimmers and Pruners, May 2019 (latest data), https://www.bls.gov/oes/current/naics5_561730.htm

CELP System Data	
Distribution Line Miles	271.4
Transmission Line Miles	13.34

Data from PGMS 2018 Audit (Attachment DR 4.2)	**Amount**	**Notes**
Distribution System		
Distribution Line Miles Estimated by PGMS	230	Note that PGMS underestimates Distribution Miles
Total Cost Projection from 2018 Survey	$ 1,295,352	Assumes work can be accomplished in 2019-2021
Annual Cost for first 3-Year Distribution Maintenance Schedule (2019-2021)	$ 458,147	
Annual Cost for second 3-Year Distribution Maintenance Schedule (2022-2024)	$ 320,703	Includes 30% cost savings based on consistent, on-going maintenance commitment
Annual Cost for third 3-Year Distribution Maintenance Schedule (2025-2027)	$ 240,527	Includes additional 25% cost savings based on consistent, on-going maintenance commitment
Transmission System		
Transmission Line Miles Estimated by PGMS	18	Note that PGM overestimates Transmission Miles
Total Cost Projection from 2018 Survey	$ 200,826	Assumes work can be accomplished in 2019-2020
Annual Cost for first two-year Transmission Maintenance Schedule (2019-2020)	$ 100,413	
Predicted "Aging Factor" for each year maintenance is delayed	3.5%	

Actual Expenditures for Contract Distribution Maintenance	**Amount**
Distribution System (Response 4.2.C)	
2019	$ 160,136
2020 (January through September)	$ 261,146
Transmission System (Response 4.3.C)	
2019	$ 14,001
2020 (January through September)	$ 3,605

Contract Maintenance Difference for 2019-2020 partial (Projection - Actual)	**Amount**	**Notes**
Distribution ($)	$ 495,011	(+)=Shortfall
Distribution % completed based solely on contract maintenance cost	46%	
Transmission ($)	$ 183,219	(+)=Shortfall
Transmission % completed based solely on contract maintenance cost	9%	

Predicted Contract Maintenance Costs for 2021-2026 based on 2019-2020 history	**Amount**	**Notes**
Distribution		
Correction Factor for Underestimated Distribution Line Miles	118%	Applied to Base Cost from 2018
2021-2023 Period Base Cost	$ 1,587,151	Based on 2-year escalation from 2018 estimate
2024-2026 Period Base Cost	$ 1,247,318	Based on 5-year escalation from 2018 estimate, with 30% cost savings for second 3-Year Distribution Maintenance Schedule
Calculate Distribution Aging Factor for 2019-2020 Maintenance not performed		
Gap	54%	
Calculated Distribution Aging Factor (Gap * Aging Factor)	1.9%	Applies to 2021-2023 Period Base Cost to address maintenance gap.
Applied to First Three-Year Maintenance Period Base Cost		
2021-2023 Period Cost with Aging Factor:	$ 1,617,161	
Total Predicted Six-Year Contract Maintenance Costs - Distribution for 2021-2026	**$ 2,864,479**	
Transmission		
Correction Factor for Overestimated Transmission Line Miles	74%	Applied to Base Cost from 2018
2021-2022 Period Base Cost	$ 154,544	Based on 2-year escalation from 2018 estimate
2023-2024 Period Base Cost	$ 160,472	Based on 4-year escalation from 2018 estimate
2025-2026 Period Base Cost	$ 166,628	Based on 6-year escalation from 2018 estimate
Calculate Transmission Aging Factor for 2019-2020 Maintenance not performed		
Gap	91%	
Calculated Distribution Aging Factor (Gap * Aging Factor)	3.2%	Applies to 2021-2023 Period Base Cost to address maintenance gap.
Applied to First Two-Year Maintenance Period Base Cost		
2021-2022 Period Cost with Aging Factor:	$ 159,479	
Total Predicted Six-Year Contract Maintenance Costs - Transmission for 2021-2026	**$ 486,579**	
Grand Total Contract Maintenance Costs for 2021-2026	**$ 3,351,058**	
# of Years	6	
Average Annual Cost for Contract Maintenance	**$ 558,510**	