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**

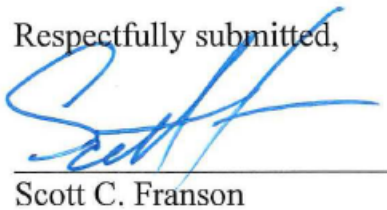
INDIANA OFFICE OF UTILITY CONSUMER COUNSELOR

PUBLIC'S EXHIBIT NO. 2

TESTIMONY OF OUCC WITNESS
MICHAEL D. ECKERT

December 23, 2020

Respectfully submitted,



Scott C. Franson
Attorney No. 27839-49
Deputy Consumer Counselor

TESTIMONY OF OUCC WITNESS MICHAEL D. ECKERT
CAUSE NO. 45420
CRAWFORDSVILLE ELECTRIC LIGHT AND POWER

I. INTRODUCTION

Q: Please state your name and business address.

A: My name is Michael D. Eckert, and my business address is 115 W. Washington St., Suite 1500 South, Indianapolis, IN, 46204.

Q: By whom are you employed and in what capacity?

A: I am employed as an Assistant Director in the Electric Division for the Indiana Office of Utility Consumer Counselor ("OUCC"). My qualifications are set forth in Appendix A of this document.

Q: What have you done to prepare your testimony in this proceeding?

A: I read Crawfordsville Electric Light and Power's ("CEL&P" or "Petitioner") petition and supporting testimonies. I prepared multiple data requests ("DR") pertaining to vegetation management ("VM") and reviewed CEL&P's original and supplemental responses.

Q: What is the purpose of your testimony?

A: My testimony addresses CEL&P's pro-forma proposed VM expense for its transmission and distribution ("T&D") systems. I conclude and explain: 1) why CEL&P's proposed pro-forma VM expense is unreasonable; 2) why the OUCC is proposing $458,147 in proposed contract VM expense; and 3) why total VM expense (in-house and contract) provides CEL&P with sufficient funds to meet its goal of transitioning away from in-house VM labor to contract VM labor. Ultimately, I recommend an annual pro-forma contract VM operation and

maintenance ("O&M") expense amount of $458,147, instead of CEL&P's $660,000 proposed pro-forma amount.

Q: To the extent you do not address a specific item or adjustment, does this mean you agree with those portions of Petitioner's proposal?

A: No. Excluding any specific adjustments or amounts CEL&P proposes does not indicate my approval of those adjustments or amounts. Rather, the scope of my testimony is limited to the specific items addressed herein.

Q: Did CEL&P file any testimony to support its requested pro-forma contract VM expense or its VM plan?

A: No. CEL&P's witnesses did not provide any written testimony justifying its VM request. VM is only mentioned once in CEL&P's witness Jennifer Z. Wilson's testimony,[1] supporting Accounting Adjustment 7. CEL&P did not provide testimony to support: 1) its $660,000 pro-forma request; 2) the nature of the expenses to be incurred; and 3) the benefits of the proposed CEL&P system expense. As evidenced by CEL&P's various original and supplemental data request responses included as attachments to my testimony, the basis for CEL&P's proposed VM expense in this Cause has been a moving target that has been revised throughout the course of the OUCC's evaluation of CEL&P's request.

Q: Did the OUCC participate in a teleconference with CEL&P personnel and issue DRs regarding VM expense?

A: Yes. CEL&P's lack of VM testimony required the OUCC to issue DRs to CEL&P and to schedule a virtual meeting on October 23, 2020.

[1] See Direct Testimony of Jennifer Z. Wilson, p. 12.

II. PRO-FORMA VM EXPENSE AMOUNT

Q: Does CEL&P's test year or historical VM expense support its total requested VM expense of $757,035?

A: No. CEL&P's requested pro-forma amount is significantly higher than its $344,560 total test year VM expense amount (see Table 1) and is significantly higher than any actual VM expense CEL&P has incurred since 2012. (See Table 3).

Table 1: CEL&P Test Year Vegetation Management Expense

Description	Total
In-House VM[2]	$97,035
Contract VM[3]	$247,525
Total	$344,560

Q: Please explain how CEL&P calculated its $757,035 total proposed pro-forma VM expense (See Table 2).

A: CEL&P's proposed pro-forma VM expense consists of two parts, in-house and contract VM. Petitioner included $97,035 of in-house VM expense in its proposed pro-forma expense and has not made an adjustment to this amount. In addition to in-house VM expense, CEL&P also includes $660,000 of contract VM as part of its total pro-forma VM expense. CEL&P increases its $247,525 test year contract VM expense by $412,475. This is a 167% increase to contract VM expense. CEL&P's only explanation for this increase is in Ms. Wilson's testimony, where she states, "Adjustment (7) allows the utility to accelerate the vegetation management plan."[4]

[2] See Attachment MDE-1, p. 1, CEL&P Second Supplemental Response to OUCC Data Request 13.3.
[3] See CEL&P's Submission of Petitioner's MSFRs – Exhibit 6, p. 111.
[4] See Direct Testimony of Jennifer Z. Wilson, p. 12, line 22.

Table 2: CEL&P Pro-Forma Proposed Vegetation Management Expense

Description	Total
In-house Expense[5]	$97,035
Contract[6]	$247,525
Pro-Forma Contract Adjustment[7]	$412,475
Total	$757,035

Q: How did CEL&P calculate its proposed pro-forma contract VM expense amount?

A: In 2018, Petitioner received a quote from Plant Growth Management, LLC ("PGM") to perform VM services on CEL&P's T&D systems for seven years at a $225,314 yearly cost.[8] Petitioner did not hire PGM in 2018. Prior to filing this rate case, CEL&P contacted PGM for an updated quote, and PGM verbally indicated its annual VM expense for a seven-year period would be $330,000, as opposed to $225,314 per year in its 2018 quote.[9] CEL&P doubled the new annual quote of $330,000 to $660,000, as it intends to complete the trim cycle in 3.5 years, as opposed to seven years.

[5] See Attachment MDE-1, p. 1, CEL&P Second Supplemental Response to OUCC Data Request 13.3.
[6] See CEL&P's Submission of Petitioner's MSFRs – Exhibit 6, p. 111.
[7] *Id.*
[8] See Attachment MDE-2, pp. 1–4, CEL&P response to OUCC Data Request 4.2D, Attachment 4.2.
[9] *Id.*

Q: What amount of annual VM expense has CEL&P incurred since January 2012?

A: Table 3 below shows CEL&P's historical VM expense since 2012:

Table 3: CEL&P's Historical VM Expense[10]

Year	Contracted	In-House	Total
2012	$1,295.00	$0.00	$1,295.00
2013	1,845.00	35,283.56	37,128.56
2014	0	115,228.67	115,228.67
2015	2,195.00	115,433.00	117,628.00
2016	0	105,467.47	105,467.47
2017	14,231.25	104,317.76	118.549.01
2018	61,133.73	220,439.08	281,572.81
2019	174,137.79	95,842.27	269,980.06
01/2020 to 09/2020	264,751.88	80,366.37	345,118.25

Q: Based on your analysis, does any of the historical data CEL&P provided support its requested pro-forma amount?

A: No. CEL&P's $757,035 pro-forma expense request is $412,475 higher than the $344,560 test year amount. Even CEL&P's highest annual 12-month expense level of $281,572.81 in 2018 falls well below its current pro-forma request. Thus, CEL&P's test year expense and its historical expense amounts do not provide justification for its $757,036 pro-forma VM expense amount. While Ms. Wilson's Adjustment 7 refers to an "accelerated" VM plan, CEL&P did not explain why it believes its VM plan requires acceleration.

III. IN-HOUSE VM TRANSITION TO CONTRACT VM

Q: Is CEL&P planning to transition from in-house VM to contract VM?

A: Yes. In response to OUCC DR 13.6,[11] CEL&P states:

[10] See Attachment MDE-3, pp. 1–2, CEL&P Supplemental Response to OUCC Data Request 13.3.
[11] See Attachment MDE-4, p. 4, CEL&P response to OUCC Data Request 13.6.

> At this time, CEL&P does not plan to eliminate in-house tree trimming. *CEL&P plans to transition over to 100% contracted vegetation management* as staffing changes happen (for example, the future retirements of existing tree trimming staff, the timing of which is yet unknown). [emphasis added]

In response to OUCC DR 13.9(g),[12] CEL&P further states it "does not plan to eliminate in-house vegetation management until the employees decide to retire or terminate their employment with CEL&P." Therefore, CEL&P does not have an actual date on which its in-house VM will be eliminated. Instead, CEL&P's transition to contract VM is based on future employee retirements.

Q: What is CEL&P's explanation as to why it wants to transition from in-house VM to contract VM labor?

A: In response to OUCC DR 4.10,[13] CEL&P states:

> Two (2) CEL&P employees are assigned to spend 100% of their time dedicated to tree trimming. Over the last few years, both have been on medical leave twice for (6) months at a time. These employees continue to be ill in health, and are close to retirement age. When CEL&P first began dealing with these staffing issues, it assigned its Journeyman Lineman to trim trees, instead of increasing its vegetation management budget. However, this did not work well because the Journeyman could not trim trees every day, and had to be constantly pulled from tree trimming work to perform their regular job duties.

Q: Does CEL&P plan to use in-house VM until it transitions to contract VM?

A: Yes. In response to OUCC DR 13.9g,[14] CEL&P states:

[12] See Attachment MDE-5, p. 2, CEL&P response to OUCC Data Request 13.9(g).
[13] See Attachment MDE-6, p. 1, CEL&P response to OUCC Data Request 4.10.
[14]See Attachment MDE-5, p. 2, CEL&P response to OUCC Data Request 13.9(g).

In the meantime, some vegetation in-house work will still be needed, such as for storm response and anything outside the consultant's contract. Additionally, some of the in-house vegetation management expense has been performed by employees whose primarily role does not include vegetation management. CEL&P anticipates such employees' salaries will be allocated to other functional areas of the utility as CEL&P transitions to contracted vegetation management.

Q: Did CEL&P receive a quote from PGM to provide contract VM to maintain its system?

A: Yes. In 2018, PGM provided CEL&P[15] four different quotes to maintain its entire T&D system with prices based on completing VM work within one, three, four, and seven years. See Table 4 below:

Table 4: PGM Quotes for VM Work

Quote for Yearly Cycle	Distribution	Transmission	Total Combined Cycle Spend
1 Year	$1,295,352.47	$200,825.85	$1,496,178.32
3 Years	$458,147	$0	$1,374,441[1]
4 Years	$355,636	$0	$1,422,544[1]
7 Years	$225,314	$0	$1,577,198[1]

[1] Total Combined Cycle Spend = Cycle Years * (Distribution + Transmission)

Additionally, in response to OUCC DR 4.2(D), Attachment 4.2, CEL&P provided PGM's 3-year quote, which states:

[15] See Attachment MDE-2, pp. 1-4, CEL&P response to OUCC Data Request 4.2D, Attachment 4.2.

> This option assumes that all necessary maintenance can be completed within three budget years. This option would allow Crawfordsville Electric Light & Power to achieve the potential in average cost savings of 30% of the total budget (approximately $137,444) by the maintenance year of 2022. If fully funded at the 70% of the remainder ($320,703) during the 2022 budget year another estimated cost savings of 25% (approximately $80,176) would be realized bringing the 2025 needed budget down to approximately $240,527. Therefore, the three year maintenance cycle actually costs a total of $1,057,261 over three years before the 30% reduction comes into play in 2022.

Q: Is the OUCC opposing CEL&P's proposed contract VM expense?

A: Yes. CEL&P's $660,000 proposed contract VM amount was based on a verbal estimate PGM provided to CEL&P and CEL&P could not provide any support documentation. Instead, CEL&P's only documentation to support its proposed VM contract expense is PGM's 2018 quote,[16] which shows a total three-year quote of $458,147. Except for PGM's quote for the cost to complete all VM work in one year, each PGM proposal costs less than CEL&P's proposed contract VM of $660,000 and its total pro-forma VM expense (including in-house VM) of $757,035. While CEL&P's proposed contract VM expense is unreasonable, CEL&P's evidence shows it has experienced problems historically with meeting its VM needs using its in-house VM labor. Using PGM's quoted contract VM expense and relying on CEL&P's historical experience with contract VM labor being more efficient than CEL&P's in-house VM labor, the OUCC does not oppose CEL&P's transition to contract VM exclusively.

[16] *Id.*

Q: What does the OUCC recommend regarding CEL&P's VM expense?

A: The OUCC recommends CEL&P's rates reflect $458,147 contract VM expense and $97,035 in-house VM expense, for a total $555,182 pro-forma VM T&D expense.

Q: Why is the OUCC recommending CEL&P's rates reflect $458,147 contract VM expense?

A: This amount is supported by PGM's 2018 quote, which was provided in response to OUCC DR 4.2D as Attachment 4.2. This quote is a reasonable amount of VM expense that should assist CEL&P to transition away from using inefficient in-house VM labor.

Q: Why is the OUCC recommending CEL&P's rates reflect CEL&P's proposed $97,035 pro-forma in-house VM expense, even when CEL&P will eventually transition to 100% contract VM?

A: CEL&P's proposed pro-forma in-house VM expense will provide CEL&P with sufficient funds to transition from in-house VM to contract VM. PGM's contract VM quote was provided in 2018 and may be slightly stale. If it is stale, CEL&P's in-house VM expense will provide CEL&P funds to transition from a combined VM (in-house and contract) to contract only VM. Thus, as in-house VM expense is phased out, those dollars can be used to fund increasing contract VM expense. This amount will allow CEL&P to hire its VM contractor while still maintaining its in-house VM labor until the employees retire and/or reassigned.

IV. OUCC CONCLUSIONS AND RECOMMENDATIONS

Q: What do you conclude regarding CEL&P's proposed VM expense?

A: I conclude CEL&P's requested VM expense is overstated. Additionally, CEL&P provided no support or justification in its testimony for the proposed VM expense, and its historical VM spend and VM quotes reflect much lower amounts than what

CEL&P proposes to include in rates in this Cause.

Q: What do you recommend?

A: I recommend the Commission authorize CEL&P to recover $555,182 (in-house VM of $97,035 and contract VM of $458,147) in its pro-forma VM T&D expense. This amount will provide CEL&P sufficient funds to transition away from in-house VM expense to contracted VM expense and will allow for sufficient maintenance of its T&D systems.

Q: Does this conclude your testimony?

A: Yes.

APPENDIX A – QUALIFICATIONS OF MICHAEL D. ECKERT

Q: Please describe your educational background and experience.

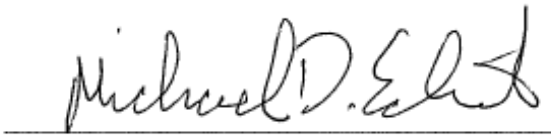
A: I graduated from Purdue University in West Lafayette, Indiana in December 1986, with a Bachelor of Science degree, majoring in Accounting. I am licensed in the State of Indiana as a Certified Public Accountant. Upon graduation, I worked as a Field Auditor with the Audit Bureau of Circulation in Schaumburg, Illinois until October 1987. In December 1987, I accepted a position as a Staff Accountant with the OUCC. In May 1995, I was promoted to Principal Accountant and in December 1997, I was promoted to Assistant Chief Accountant. As part of the OUCC's reorganization, I accepted the position of Assistant Director of its Telecommunications Division in July 1999. From January 2000 through May 2000, I was the Acting Director of the Telecommunications Division. As part of an OUCC reorganization, I accepted a position as a Senior Utility Analyst. In September 2017, I accepted the position of Assistant Director of the Electric Division. As part of my continuing education, I have attended the National Association of Regulatory Utility Commissioners ("NARUC") two-week seminar in Lansing, Michigan. I attended NARUC's Spring 1993 and 1996 seminar on system of accounts. In addition, I attended several CPA sponsored courses and the Institute of Public Utilities Annual Conference in December 1994 and December 2000.

Q: Have you previously testified before the Commission?

A: Yes.

AFFIRMATION

I affirm, under the penalties for perjury, that the foregoing representations are true.



By: Michael D. Eckert
Assistant Director of the Electric Division
Indiana Office of Utility Consumer Counselor

Cause No. 45420
Crawfordsville Electric Light and Power

Date: December 23, 2020

Second Supplemental Response on DR 13.3 on Vegetation Management Expense:

The following table provides the corrected test year vegetation management summary. The test year tree trimming work orders totaled $92,761.47. In the table below, the employees' salaries and wages that are assigned to tree trimming comprise $68,798 of the total tree trimming work orders. Other employees that are assigned to other positions comprise the remaining $23,964. An additional amount of the unidentified labor component (labor amounts in account 593 that weren't identified with a specific work order) have been allocated to the tree trimmers and the other labor that performed tree trimming services. Thus, the in-house labor of vegetation management amounts to $97,035 in the test year. This added to the vegetation management contract amount of $247,525 amounts to $344,560 total vegetation management in the test year.

Test Year Vegetation Management		
Tree Trimmers Salaries and Wages (TTSW)	$	68,798
TTSW Unidentified Portion Allocation		3,169
Other Labor Salaries and Wages		
Assistance with Tree Trimming (OLSW)		23,964
OLSW Unidentified Portion Allocation		1,104
Total Tree Trimmers, Other Labor,		
and Unidentified Portion	$	97,035
Contract Amount		247,525
Total Vegetation Management Test Year	$	344,560

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2018 Audit Summary for Crawfordsville Electric Light & Power

Purpose:
Field data has been collected for a 41% sampling of the 230 miles of overhead primary electric lines belonging to Crawfordsville Electric Light & Power. This data will be used to determine the amount of necessary tree work per mile which then can be used to determine the total estimated budgetary needs for the entire system. The audit will enable Crawfordsville Electric Light & Power to better allocate resources across its system, predict the necessary upcoming yearly budgets, and develop or modify the right-of-way program to best fit the system's needs.

Procedural Summary:

- Forty seven plots were randomly selected and each random plot was 2 mile in length (41% of 230 pole line miles).
- A yearly maintenance cycle is defined as one year and is determined by the budget or fiscal year. A long-term maintenance cycle is the time taken to complete all right-of-way activities throughout the entire system and is usually 2-4 years.
- The number of trees requiring maintenance *within the first year, for a three year cycle* were identified and categorized as tree units.
- A tree is defined as any woody stem having a 4" or greater diameter at breast height. (DBH)
- All brush was identified as either "manually cut" (chainsaw), "mow-able" or "spray-able brush" (herbicide applications).
- Manually cut brush is defined as woody stems with a DBH of less than 4" and a brush unit is measured in 500 square feet increments.
- Mow-able and spray-able brush is defined by the individual pole span and generally includes brush and an indeterminate number of trees as defined above.

Results:
According to the data collected, averages have been extrapolated for the entire system and applied to the following categories; trim, removal, brush cut, brush mow, and brush spray.

- The total number of overhead primary line miles on the system is 230.
- The average number of trees per mile needing to be addressed within the first cycle is 36.7, which equates to a total of 8,444 tree units[1].
- An estimated 4,644 trees within the entire system needing to be removed.
  A conservative multiplier of 55% is used to determine the total number of trees needing removal. This percentage is based on Plant Growth Management Systems' past & present contract history when homeowner permission is actively sought. By applying the above-mentioned 55% multiplier to the average number of trees per mile (36.7), it can be determined that 20.2 trees could be *removed* per mile.

[1]Based on the data collected during the 2018 survey, PGMS is 80% confident that the estimated number of tree units per mile is 36.7 ± 13.2.

- An estimated 3,800 trees will need to be *trimmed*.
- The average number of "manually cut" units of brush per mile is 2.4, which equates to 549.
- The average number of "mow-able" spans of brush per mile is 1.0, which equates to 236.5.
- The average number of "spray-able" spans of brush per mile is 0.4, which equates to 91.8.
- The average number of "spray-able" spans of brush per mile for post mow areas is 1.0, which equates to 91.8. Typically, after each span is cleared mechanically it is treated with an herbicide after one growing season. Depending on timing this can be accomplished within the same or the following calendar year.
- The average number trees requiring a TGR application per mile is 2.2, which equates to 512.

Total Distribution System Cost

Production-based Unit Work with estimated Time and Material Work

Crawfordsville Electric Light and Power Line Clearance Survey			
Total Estimated Work			
	Quantity	Industry Average	Total Cost
Trims	3,800	$ 94.00	$ 357,178.50
Removals	4,644	$ 94.00	$ 436,551.50
Brush cut (500 ft. sq.)	549	$ 60.00	$ 32,929.15
Brush Mow (spans)	237	$ 500.00	$ 118,254.26
Brush Spray (spans)	92	$ 40.00	$ 3,670.21
Brush Spray PM (spans)	237	$ 40.00	$ 9,460.34
Tree Growth Regulator (TGR)	512	$ 75.00	$ 38,381.02
Total maintenance budget			$ 996,424.98
Management			$ 298,927.49
Total Right of Way Maintenance Budget with Management			**$ 1,295,352.47**

*-Unit cost is based on industry standards and current contract averages. The unit cost reflects a maximum of 10% of all manual work being completed on a time and material basis.

**-On similar systems to Crawfordsville Electric Light & Power, PGMS management averages around 20-25% of the total tree trimming budget.

Discussion Points:

Production-based unit work has proven to be the best method for the vast majority of maintenance programs administered by PGMS. Over time, it is the most cost effective method, and it is designed to put the responsibility of efficiency and production on the tree contractor, not the utility. Time & Material work, at times, is necessary and fair when trees fall into one of the following groups: high-risk trees, very large trees, or trees requiring long distance travel, it is expected that 10% or less will be completed using the time and material method.

The use of mechanical clearing of trees (Fecon mowing system) can reduce the cost of traditional hand clearing by as much as six times. As the program evolves, this method of clearing coupled with follow up herbicide treatments can limit the need for future mow cycles.

The use of herbicide will lower the overall cost of maintenance throughout a system. By properly applying herbicide, future problems are prevented and costs are reduced by as much as ten times the cost of traditional hand clearing. Using herbicides on these areas eliminates the need for future mowing or hand clearing and encourages the growth of utility-compatible grasses and sedges.

The proper use of a tree growth regulator is also critical in reducing the cost of repeated trimming of high maintenance trees. Based on past experience, PGMS typically sees 45% of all trees trimmed receiving a growth regulator on average. This percentage can increase when budgetary restrictions limit the funds available to complete larger tree removals as trimming and treating with a growth regulator tend to be far

cheaper.

Distribution Management Options:

On average, utility systems managed by PGMS see a decrease in cost of between 25 and 35% from the first long term maintenance cycle and the second. Between the second and third maintenance cycle an additional reduction of approximately 20 to 25% is expected. After the third cycle the cost reduction tends to level out, but additional savings are realized through fully implementing tree growth regulators across the system.

3 Year Distribution Maintenance Cycle Cost $458,147 ***Recommended***

This option assumes that all necessary maintenance can be completed within three budget years. This option would allow Crawfordsville Electric Light & Power to achieve the potential in average cost savings of 30% of the total budget (approximately $137,444) by the maintenance year of 2022. If fully funded at the 70% of the remainder ($320,703) during the 2022 budget year another estimated cost savings of 25% (approximately $80,176) would be realized bringing the 2025 needed budget down to approximately $240,527. **Therefore this three year maintenance cycle actually costs a total of $1,057,261 over three years before the 30% reduction comes into play in 2022.**

4 Year Distribution Maintenance Cycle Cost $355,636

This option assumes that all necessary maintenance can be completed within four budget years. This option would allow Crawfordsville Electric Light & Power to achieve the potential in average cost reduction of 30% or ($112,025) by the maintenance year of 2023. However, There is an "Aging Factor of 3.5% for each year maintenance is delayed. **Therefore this four year maintenance cycle actually costs a total of $1,094,265 over four years before the 30% reduction comes into play in 2023.**

7 Year Distribution Maintenance Cycle Cost $225,314 ***Present 2019 Funding Level***

This option assumes that all necessary maintenance can be completed within seven budget years. This option would allow Crawfordsville Electric Light & Power to achieve the potential in average cost reduction of 30% or ($67,594) by the maintenance year of 2022. However, There is an "Aging Factor of 3.5% for each year maintenance is delayed. **Therefore in reality this three year maintenance cycle actually costs a total of $1,213,232 over seven years before the 30% reduction comes into play in 2022.**

The Maintenance Cycle can be adjusted to coincide with the available funds in the budget. **Please note that the rule of thumb applies: the shorter the maintenance cycle the sooner the cost savings will occur.**

Total Transmission System Cost

Estimated Cost of Lump-Sum Bid to Clear Entire 138kV Transmission Loop

Transmission Voltage	**138kV**
Mileage	**18**
Estimated Line Mile Cost	**$11,156.99**
Total Cycle Budget	**$200,825.85**

Transmission Management Options:

Option 1: Fully fund the transmission work in 2019

This option would require funding the transmission work from a different source than the routine distribution line clearance budget to avoid falling behind. Clearing the whole transmission system in one

year would allow CELP to protect the highest priority lines and address hazard trees which have the potential of causing a transmission outage. This assumes that funding could be put in place to cover these costs in addition to the distribution line clearance budget.

Option 2: Partially fund the transmission work over 2019 and 2020

This option would see the most critical areas of the transmission work completed in 2019 with the remainder of the transmission loop completed in 2020. This option involves more risk than the first option as hazard trees will remain on the system over a two year period. It would be preferable to fund the transmission budget out of another source to remain on track with the distribution clearance plan. In the event that additional funding cannot be secured, option two would be the default plan as funds would have to be taken from the distribution budget to cover transmission costs. Doing this would add an additional year to the first cycle making the current cycle a total of 8 years.

Suggested Course of Action:

The key word for creating a long term, cost effective maintenance program is "patience". In a Long Term Maintenance Program, choices have to be made with the impact on the system, both immediately and for the future, with cost decreases starting in the first year of the next full cycle. To achieve a full maintenance cycle for Crawfordsville Electric Light & Power's system, the program will require the use of a large range of tools (i.e.: herbicide use, ANSI A300 trimming standards, specialized equipment, tree growth regulators, and aggressive vegetation removal). In addition, the budget needs to be flexible and responsive to the needs at hand, while staying within a pre-determined budget period.

With the thought of overall cost reduction in mind, Production-based Unit Work should be used to increase tree trimming production and allow Crawfordsville Electric Light & Power to begin establishing historical data for the actual costs of the maintenance program. The need for a trained Forestry Manager is essential in properly implementing and monitoring the program. The creation of an effective program means very little if it cannot be correctly administered and supervised. Traditionally within the first year of implementing this suggested program, the system will see an increase in reliability and a reduction in outages, operations, and overtime expenditures. Reduction in maintenance costs will become evident by the end of the last year of the first trimming cycle. Additionally the over-all health of the population of trees maintained within the right-of-way maintenance program improves as the effects of proper pruning and correct management techniques are consistently implemented.

In an ideal situation, PGMS would recommend a three year distribution cycle to start. Based on the current funding, CELP is funded on a seven year cycle. This current level of funding will create some issues with maintaining adequate clearances due to the longer cycle. In light of the present funding, PGMS recommends prioritizing the 138kV transmission line and backlot lines through the first two years. In order to maximize the return on investment, tree growth regulators (approximately $75,000) and mechanical clearing (approximately $118,000) will be heavily implemented in 2019 and 2020. TGRs will be utilized to slow the growth on trees cleared in 2018. Mechanical clearing is 6 times more effective at removing vegetation at the same cost as traditional hand-cutting. With limited funding, it will be critical to lengthen the effective trimming cycle with TGRs while aggressively removing as many trees as possible with the least amount of expense by mechanically clearing vegetation.

PGMS can design and implement any of the previous management options or build one completely unique for Crawfordsville Electric Light & Power which will increase reliability and decrease the total cost of the right-of-way maintenance program. We look forward to the opportunity to help improve the right-of-way-program at Crawfordsville Electric Light & Power.

Sincerely,
Mark P. Mann, CEO & Owner
Plant Growth Management Systems
574-532-4968

Supplemental Responses to Q 4.2(C), 4.3(C), 13.1 and 13.3 on Vegetation Management Expense:

CEL&P discovered an error in its Responses to Data Request Sets #4 and #13 related to vegetation management expense. As reflected in the Response to Q 4.1, Vegetation Management Expense is recorded in general ledger accounts 593 (distribution) and 571 (transmission). The error was not identifying and separating out the overhead line maintenance and other work orders not related to vegetation management that was included in these general ledger accounts. The responses to 4.2(C), 4.3(C), 13.1 and 13.3 mistakenly represented that only expenses for vegetation management were contained in the general ledger accounts 593 (distribution) and 571 (transmission). Overhead line maintenance was the majority of expense in these accounts, and thus significantly overstated the amount of in-house vegetation management expense that was represented to the OUCC in the data responses.

By analyzing the work orders listed for the in-house costs, the cost of the in-house labor for vegetation management portion of each account was determined. Vegetation management activities are included in the "Tree Trimming" work orders. Below is a summary:

Account 593 In-house Labor

Year	Tree Trimming	Overhead Maintenance	Other Work Orders	Total Work Orders	Unidentified by Work Order	Total
2012	$ -	$ 581,866.79	$ 32,646.78	$ 614,513.57	$ 25,406.44	$ 639,920.01
2013	33,232.24	494,302.11	10,232.91	537,767.26	33,194.72	570,961.98
2014	102,395.09	395,206.35	10,455.86	508,057.30	63,676.84	571,734.14
2015	102,243.36	471,147.92	882.91	574,274.19	74,082.73	648,356.92
2016	100,566.93	526,282.61	4,421.39	631,270.93	30,761.26	662,032.19
2017	89,414.91	390,360.85	8,779.50	488,555.26	81,427.88	569,983.14
2018	198,787.69	400,477.07	3,522.97	602,787.73	65,653.92	668,441.65
2019	91,039.97	495,169.79	14,865.94	601,075.70	31,706.35	632,782.05
1/20 to 9/20	75,699.31	261,294.08	5,128.35	342,121.74	21,092.70	363,214.44

	Account 571 In-house Labor					
Year	Tree Trimming	Overhead Maintenance	Other Work Orders	Total Work Orders	Unidentified by Work Order	Total
2012						
2013						
2014						
2015						
2016						
2017						
2018						
2019		$ 62,664.14		$ 62,664.14		$ 62,664.14
1/20 to 9/20		2,104.52		2,104.52		2,104.52

A portion of the unidentified by work order is allocated to tree trimming proportionally by the percentage of tree trimming work orders to total work orders, and is summarized in the table below. The contracted amount from the responses in 4.2(C) and 4.3(C) is added to the Tree Trimming and Allocation of Unidentified to summarize the total amount of vegetation management by years 2012 through 2019 and January through September 2020.

	Vegetation Management Summary		
Year	Tree Trimming & Allocation of Unidentified	Contracted	Total
2012	$ -	$ 1,295.00	$ 1,295.00
2013	35,283.56	1,845.00	37,128.56
2014	115,228.67	-	115,228.67
2015	115,433.00	2,195.00	117,628.00
2016	105,467.47	-	105,467.47
2017	104,317.76	14,231.25	118,549.01
2018	220,439.08	61,133.73	281,572.81
2019	95,842.27	174,137.79	269,980.06
1/20 to 9/20	80,366.37	264,751.88	345,118.25

Q 13.6: Does CEL&P plan to go to 100% contract labor for vegetation management expense after the Commission issues it order in this proceeding? If no, please explain why and what percentage CEL&P plans to split vegetation management between contract and "In-house" after the rate case.

Response: No. At this time, CEL&P does not plan to eliminate in-house tree trimming. CEL&P plans to transition over to 100% contracted vegetation management as staffing changes happen (for example, the future retirements of existing tree trimming staff, the timing of which is yet unknown).

Q 13.9: Referring to Petitioner's response to OUCC Data Request 4.2, Attachment DR 4.2, please answer the following questions:

a. Does the table titled "Crawfordsville Electric Light and Power Line Clearance Survey" reflect Plant Growth Management Systems, LLC estimate of the total cost ($1,295,352.47) to perform vegetation management work on the CELP's 230 miles of "overhead primary line" miles? If no, please explain what this number reflects?

Response: Yes, this reflects the total estimated cost to perform vegetation management work on the distribution system (in 2018 dollars).

b. Is the term "overhead primary line" the same as distribution lines? If no, please explain the difference?

Response: Yes, those terms are the same.

c. Does the table on page 3 reflect Plant Growth Management Systems, LLC estimate of the total cost ($200,825.85) to perform vegetation management work on the CELP's 18 miles of "transmission loop" miles? If no, please explain what this number reflects?

Response: Yes, this reflects the total estimated cost to perform vegetation management work on the transmission system (in 2018 dollars).

d. Will the transmission loop be trimmed on a 3 year cycle?

Response: Yes, it the transmission lines will be trimmed on a 3 year cycle.

e. Is the term "transmission loop" the same as transmission lines? If no, please explain the difference?

Response: Yes, those terms are the same.

f. On Page 3, under distribution management options, a proposal for a 3-year distribution maintenance cycle at an annual cost of $458,147 is shown. Please explain the difference between the $458,147 and the $660,000 CEL&P is requesting.

Response: At the time of the survey in 2018, the contractor estimated $458,147 as the cost of a 3-year trim cycle (Attachment DR 4.2, page 3). The proposed $660,000 vegetation management budget is to catch CEL&P's system up to where it should be (since as explained in the Responses to OUCC Data Request Set #4, the Utility is far behind in its current 7-year cycle). CEL&P will then start a 3-year cycle from that point forward.

g. If the contractor is proposing to perform vegetation management on all the distribution lines, please explain why CEL&P has including in-house vegetation management expense as part of its proposed operating expenses.

Response: As noted in the Response above to Q 13.6, CEL&P does not plan to eliminate in-house vegetation management until the employees decide to retire or terminate their employment with CEL&P. At such time, the positions will be eliminated and the employees will not be replaced. In the meantime, some vegetation in-house work will still be needed, such as for storm response and anything outside the consultant's contract. Additionally, some of the in-house vegetation management expense has been performed by employees whose primarily role does not include vegetation management. CEL&P anticipates such employee salaries will be allocated to other functional areas of the utility as CEL&P transitions to contracted vegetation management.

h. According to Plant Growth Management Systems LLC.'s Audit summary, the total cost to perform vegetation management on CEL&P's electric distribution and transmission system is approximately $1,500,000. Please explain why the company is proposing to recover approximately $2,000,000 over three years for vegetation management.

Response: CEL&P believes that the estimates provided in the 2018 Audit are not necessarily still accurate, as the vegetation surrounding the system is constantly growing and changing, and management costs have generally increased over time. As noted in the Audit Report, there is an "Aging Factor" of 3.5% for each year maintenance is delayed (Attachment DR 4.2, page 3). By the time the Commission issues a Final Order in this Cause in 2021, it will have been 3+ years since the Audit; meanwhile, completion of the current 7-year trim cycle has been significantly delayed. Not only does the proposed increased vegetation

management expense help the utility catch-up and complete the 7-year cycle that it is currently behind on, but also on a going forward basis, the increased vegetation management budget allows CEL&P to transition to a more appropriate 3-year trim cycle. CEL&P believes that this is not only prudent utility management, but is also financially responsible, and easier to maintain than the current 7-year cycle. Given the Aging Factor, increases in costs since the 2018 Audit estimates, how far behind the utility is in the current 7-year cycle, and its intention to transition to a 3-year cycle, CEL&P believes its proposed vegetation management expense is reasonable.

Q 4.10: Please provide the rationale and a detailed description of CEL&P's proposed VM "accelerated plan" (Reference CEL&P's proposed Adjustment 7).

Response: Three years ago, the utility got off track in its regular four year trim cycle and at the present trim rate, will need an additional four years to complete this cycle (for a total of seven years). Two (2) CEL&P employees are assigned to spend 100% of their time dedicated to tree trimming. Over the last few years, both have been on medical leave twice for six (6) months at a time. These employees continue to be in ill health, and are close to retirement age. When CEL&P first began dealing with these staffing issues, it assigned its Journeymen Linemen to trim trees, instead of increasing its vegetation management budget. However this did not work well because the Journeymen could not trim trees every day, and had to be constantly pulled from trim trimming work to perform their regular job duties. With the loss of revenues CEL&P experienced due to the 2016 rate error (as detailed in Attachment PRG-3A to Mr. Goode's testimony), CEL&P did not have the funds to get caught-up in the present trim cycle in a timely fashion. These circumstances contributed to CEL&P falling further behind in the vegetation management schedule. CEL&P has also noticed an increase in the number of diseased and dead trees which need to be removed, which has increased vegetation management costs.

While CEL&P has always utilized outside vegetation management contractors to some extent, as shown in Column Q of Attachment 4.4, the utility has relied more on contractors in the last three years than it had previously. This was necessary prevent the utility from falling even farther behind in the trim cycle. CEL&P staff meets with its outside vegetation management contractor, Plant Growth Management Systems, constantly to keep updated on the status of trimming for the year. By utilizing an outside vegetation management manager instead of relying primarily on in-house staff, CEL&P also gains resources such as arborists and other experts in the field. Therefore, when new rates are set in this case in 2021, CEL&P will have sufficient vegetation management funds to begin catching up with its normal trim cycle in upcoming years. In future cycles, Mr. Goode would like each cycle to last three years, as is recommended in the 2018 Audit Survey (Attachment DR 4.2).

CERTIFICATE OF SERVICE

This is to certify that a copy of the foregoing ***Indiana Office of Utility Consumer Counselor Public's Exhibit No. 2_Testimony of OUCC Witness Michael D. Eckert*** has been served upon the following counsel of record in the captioned proceeding by electronic service on December 23, 2020.

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