Exhibit No.:	
Issue(s):	*Distribution System Investment*
Witness:	*Malachi Bowman*
Sponsoring Party:	*MoPSC Staff*
Type of Exhibit:	*Rebuttal Testimony*
Case No.:	*ER-2026-0143*
Date Testimony Prepared:	*August 11, 2026*

MISSOURI PUBLIC SERVICE COMMISSION

INDUSTRY ANALYSIS DIVISION

ENGINEERING DEPARTMENT

REBUTTAL TESTIMONY

OF

MALACHI BOWMAN

EVERGY METRO, INC. d/b/a EVERGY MISSOURI METRO

CASE NO. ER-2026-0143

Jefferson City, Missouri
August 2026

** Denotes Confidential Information **

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CASE NO. ER-2026-0143

Q. Please state your name and business address.

A. My name is Malachi A. Bowman and my business address is Missouri Public Service Commission, P.O. Box 360, Jefferson City, Missouri 65102.

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

A. I am employed by the Missouri Public Service Commission ("Commission") as an Associate Engineer in the Engineering Analysis Department, Industry Analysis Department, Commission Staff Division.

Q. What is the purpose of your rebuttal testimony?

A. I am responding to the direct testimony of Evergy Missouri Metro ("EMM") Witness Mr. Mulvany, and OPC Witnesses Mr. Shapley and Mr. Alvarez regarding distribution system investment.

RELIABILITY

Q. Please define reliability.

A. Reliability is the ability of the electric system to supply power at all times and withstand sudden disturbances.

Q. How do utilities measure reliability performance?

A. Reliability metrics are used to assess the operational performance of the distribution system in terms of reliability. Commission Rule 20 CSR 4240-23.010 establishes distribution reliability monitoring and reporting requirements of the investor-owned electric utilities, often referred to as reliability metrics. These metrics are affected by "customer density, tree density, geography, observed weather, and other factors that may be beyond the control of the electrical corporation".[1]

Q. Which reliability metrics are the utilities required to report, and what do the indices tell us about system reliability?

A. There are four metrics the electric utilities are required to report per Chapter 23 of the Commission rules:

- System Average Interruption Frequency Index ("SAIFI"), which is a gauge for the frequency of interruptions.
- System Average Interruption Duration Index ("SAIDI"), which is a gauge for the duration of outages.
- Customer Average Interruption Frequency Index ("CAIFI"), which is a gauge for how frequently impacted customers are experiencing interruptions. CAIFI differs from SAIFI in that the index only includes customers who experience interruptions.
- Customer Average Interruption Duration Index ("CAIDI"), which describes the average time to restore service. This metric only includes customers who experience interruptions.

[1] 20 CSR 4240-23.010(11)

Q. Is EMM required to report any other indices?

A. Yes. In addition to the general reliability reporting that all electric utilities are required to report per Chapter 23 of the commission rules, in the stipulation and agreement of ER-2022-0130, EMM agreed to report the:

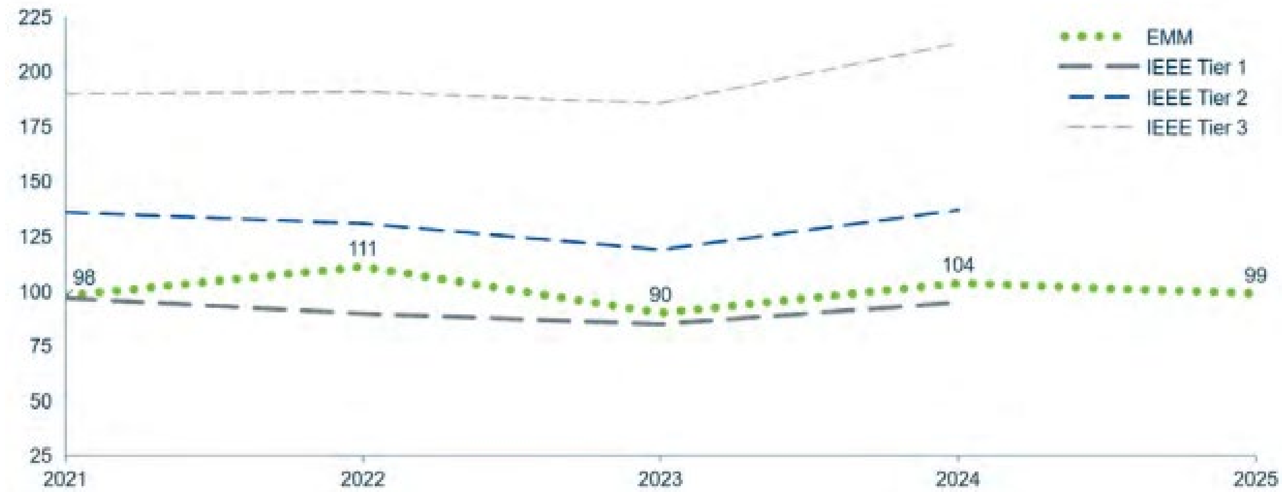
- Momentary average interruption frequency index ("MAIFI"), which is a gauge of the frequency of momentary interruptions and
- The Customers experiencing multiple interruptions ("CEMI-6") index, which indicates the ratio of individual customers experiencing more than 6 sustained interruptions to the total number of customers served.

Q. Has EMM reported these indices?

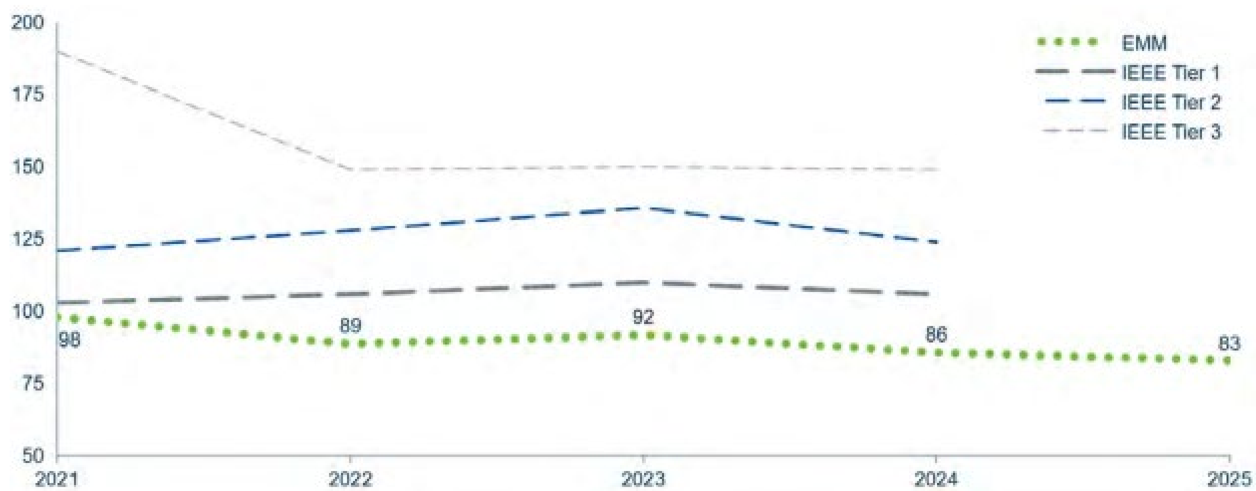
A. Yes, the metrics required by Chapter 23 and in the stipulation and agreement of ER-2022-0130 have been included in EMM's 2025 Reliability Report.[2] Additionally, Mr. Mulvany's included the SAIDI, CAIDI, and SAIFI metrics in his direct testimony along with industry-wide benchmarking to compare how EMM's System Reliability compares to the rest of the industry. The metrics from Mr. Mulvany's testimony are shown on the following page:

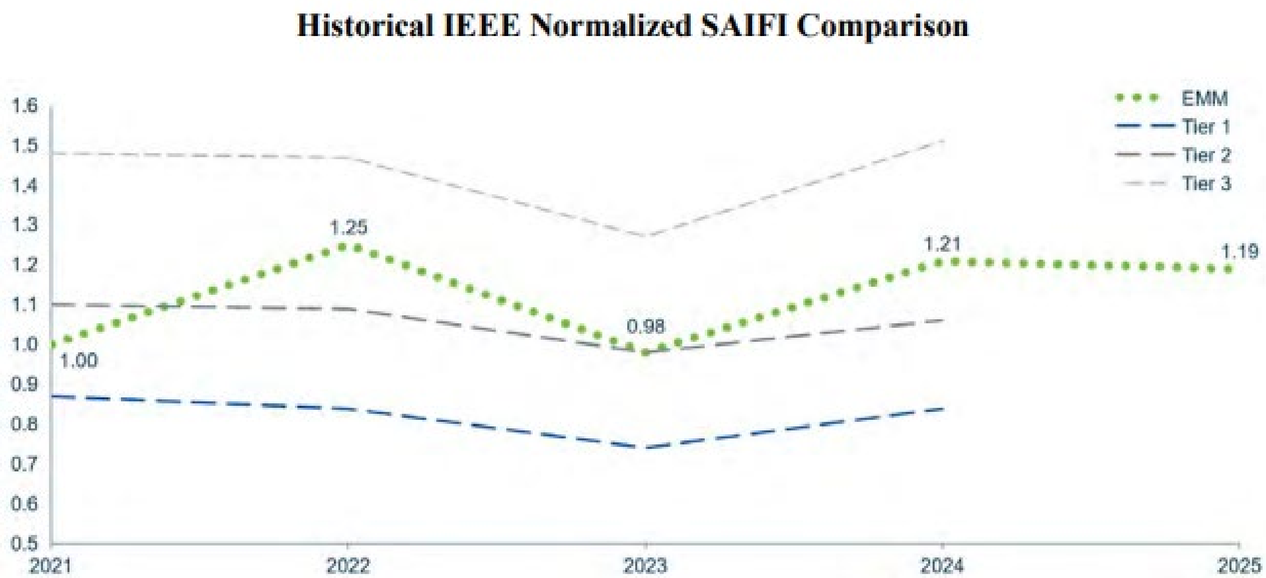
[2] EO-2026-0298 – Item 1

Figure 4: Historical IEEE Normalized SAIDI Comparison



Historical IEEE Normalized CAIDI Comparison





Q. What are the IEEE tiers?

A. EMM uses IEEE Distribution Reliability Working Group Benchmark Results from IEEE's 2025 Report. This study IEEE conducts is intended to provide information for companies to assess performance relative to their peers.[3]

Q. How does EMM represent that its system is performing?

A. Mr. Mulvany uses its CAIDI performance to state that EMM is performing well in terms of limiting the duration of outages in comparison to EMM's peers. But the SAIFI performance shows that customers are experiencing more frequent outages when compared to peers despite their competitive response times. Mr. Mulvany concludes that these trends "highlight the importance of continued investment hardening the grid to withstand major storm impacts and proactive aging asset replacement".[4]

[3] EMM response to Staff DR 281.
[4] Mulvany Direct Testimony, page 10, lines 17-18

Q. Is continued investment in "hardening the grid to withstand major storm impacts and proactive aging asset replacement" the only way to improve system reliability?

A. No. Mr. Mulvany presented that there are other causes of customer outages.

Q. What are the causes of customer outages?

A. Mr. Mulvany provided the causes of customer outages on page 11 of his direct testimony. Causes include equipment (31%), vegetation (20%), weather (14%), public (12%), unknown (7%), other (5%), wildlife (5%), and planned outages (5%) as shown in the figure below. Equipment failure is the highest cause of customer outage. But the second highest cause of customer outage is vegetation.

VEGETATION MANAGEMENT

Q. Is there a Commission rule for regulating how often a utility conducts vegetation management?

A. Yes. Commission Rule 20 CSR 4240-23.030(9)(A)5 requires each electric utility to perform vegetation management on no less than "twenty five percent (25%) of its total urban distribution miles each year, and on no less than twenty-five percent (25%) of its total rural distribution miles each eighteen (18) months."

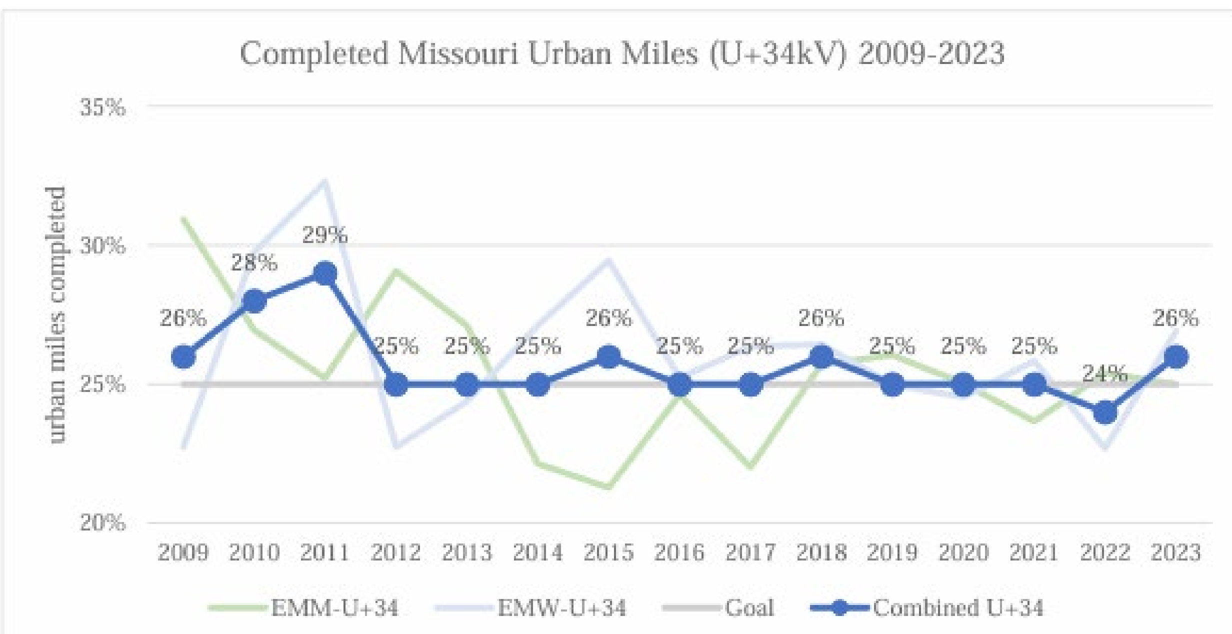
To comply with this, Evergy uses the following cycle lengths:[5]

[5] EO-2026-0259, Evergy Missouri Metro's 2025 Annual Missouri Vegetation Management Report.

Circuit Description	**Primary Cycle Length (Years)**	**Mid-cycle Inspection/Selective Tree Maintenance (Years)**
Urban Circuits	4	2
Rural Circuits	6	3

Q. Is EMM in compliance with this Commission rule?

A. No, since the inception of 20 CSR 4240-23.030(9)(A)5, Evergy has managed Missouri vegetation operations as a combined entity (Evergy Missouri Metro and Evergy Missouri West). Mr. Mulvany, in his Surrebuttal for ER-2024-0189 on page 6, presented the following chart of EMM and EMW vegetation management by electrical corporation:



Some years EMM is below the 25% requirement while EMW is above its requirement as shown between 2013 and 2018 leaving time for lines to become overgrown in EMM's service territory which could contribute to customer outages if this practice continues. If EMM desires to continue this practice, Staff recommends it file a variance request with the Commission.

Q. The chart above only has EMM's vegetation management history up to 2023. Does Staff have EMM's recent vegetation management history?

A. Yes. The table below shows EMMs recent vegetation management practices[6]. In 2024 and 2025, EMM is not compliant with 20 CSR 4240-23.030(9)(A)5 if the Commission agrees that vegetation management should be managed by each electrical corporation separately.

Year	2024	2025
EMM-U+34	20%	22%
EMW-U+34	29%	26%

Q. Is infrastructure investment the only way for EMM to improve system reliability?

A. No. EMM reported that 20% of customer outages are the result of vegetation. It is possible that increasing vegetation management within the EMM service territory could reduce customer outages without additional equipment investment.

Q. Did Mr. Mulvany, in his direct testimony, describe any plans to address customer outages caused by vegetation?

A. No.

[6] EO-2025-0275 & EO-2026-0259

STORM RESERVE

Q. Mr. Mulvaney addresses EMM's proposed Storm Reserve. Do you believe that EMM's proposal will improve reliability?

A. No. The proposed storm reserve would not impact reliability. Instead, it is intended to "smooth the rate impacts associated with the inherently unpredictable nature of storm events".[7] Staff Witness Keith Majors discusses the Storm Reserve in greater detail.

Q. Is there any other Witness Testimony that you would like to respond to?

A. Yes, I would like to respond to the direct testimonies of OPC Witness Shapley and Alvarez regarding distribution investment.

MR. SHAPLEY AND MR. ALVAREZ'S ISSUES

Q. Can you summarize Mr. Shapley and Mr. Alvarez's issues with EMM's current method of distribution investment?

A. Yes. They concluded through their discovery that EMM has been making imprudent distribution investment, and they recommended that the Commission disallow a total of $51.230 million.

Q. What investments did they identify to be imprudent?

A. Specifically, the investments were related to EMM's Lateral Reconductoring program and the Proactive Substation Transformer Replacement program.

[7] Data Request 284

Q. Why did Mr. Shapley and Mr. Alvarez consider these investments to be imprudent?

A. If I can summarize, their main concern is that EMM has been replacing assets which did not need to be replaced. Specifically, regarding EMM's Lateral Replacement Program, Alvarez takes issue with EMM basing their investment decisions on recommendations made by the AssetLens software.[8] In addition, Mr. Alvarez and Mr. Shapley are not convinced that recent substation replacements were prudent.

Q. Does Staff have any concerns with EMM's investment practices?

A. Yes, particularly for investment decisions related to the use of the AssetLens software.

Q. What programs rely on the AssetLens software?

A. Mr. Mulvany states that the Lateral Improvement and Feeder Improvement Programs use AssetLens to identify assets to replace.[9] This is concerning because over the last five years, EMM has spent $76,918,628 in its Lateral Improvement Program which is substantially higher than spending in its other programs as shown below:[10]

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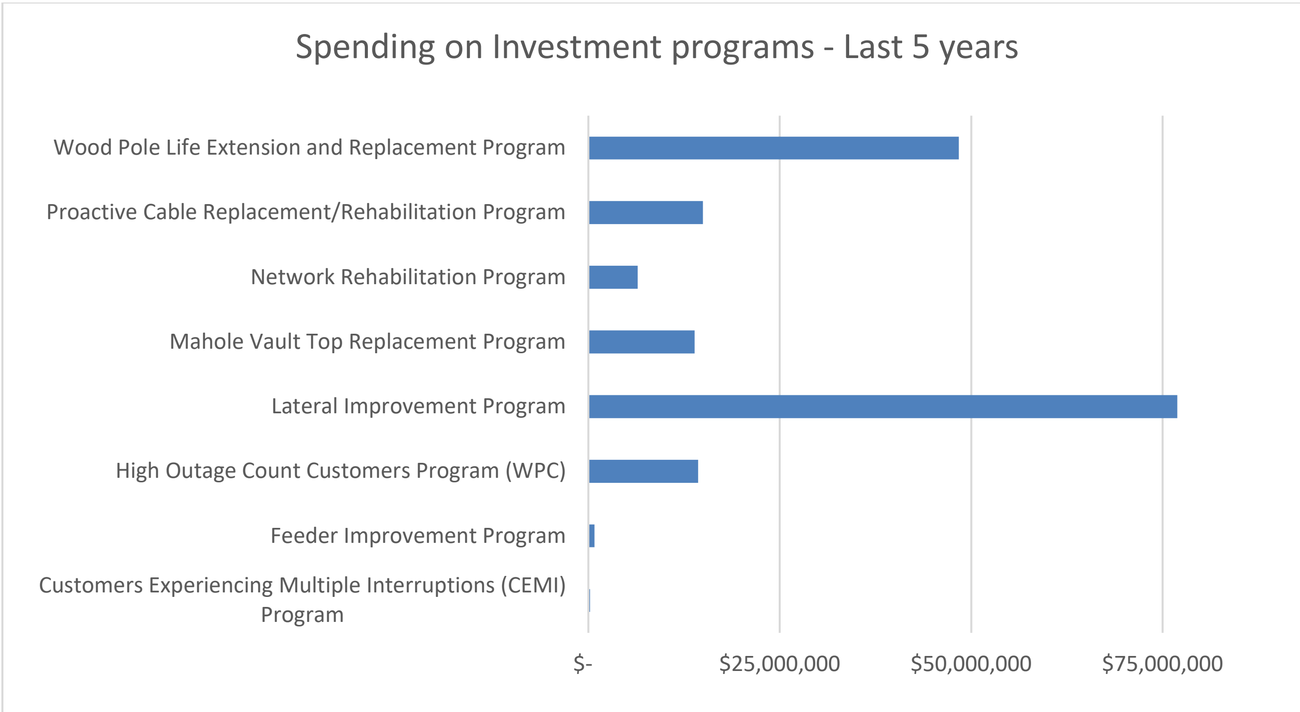
[8] Mr. Alvarez Direct Testimony Page 13
[9] Mr. Mulvany Direct Testimony Page 14
[10] Data Request 320



Q. How does the AssetLens software identify assets for replacement?

A. In its response to Staff Data Request 321, EMM stated that the software ** [redacted] . **[11] EMM then uses the AssetLens analysis as its cost benefit analysis for the basis of these replacement projects but ** [redacted] ** this analysis is not available for Staff to review.[12]

[11] Data Request 321
[12] Mr. Alvarez Schedule PJA-2 part 7

EMM relies upon the AssetLens tool to create a benefit-cost ratio which EMM bases decisions on, but EMM does not retain these ratios.[13] This is concerning to Staff because Staff cannot evaluate the cost benefit analysis for over $78 million worth of investments the company is seeking recovery.

Q. Does Staff agree that the cost of these investments should be disallowed?

A. Not necessarily. Staff would need evidence that these investments did not provide reliability value to conclude that the investments were imprudent. Mr. Alvarez states "while distribution capital spending has increased significantly, reliability has not improved,"[14] and he bases this on EMMs SAIDI values. But this is difficult to measure since it is not clear what the SAIDI values would have been without these additional investments. Additionally, it is difficult to determine whether vegetation has had a role to play in keeping the SAIDI values from improving regardless of equipment reliability.

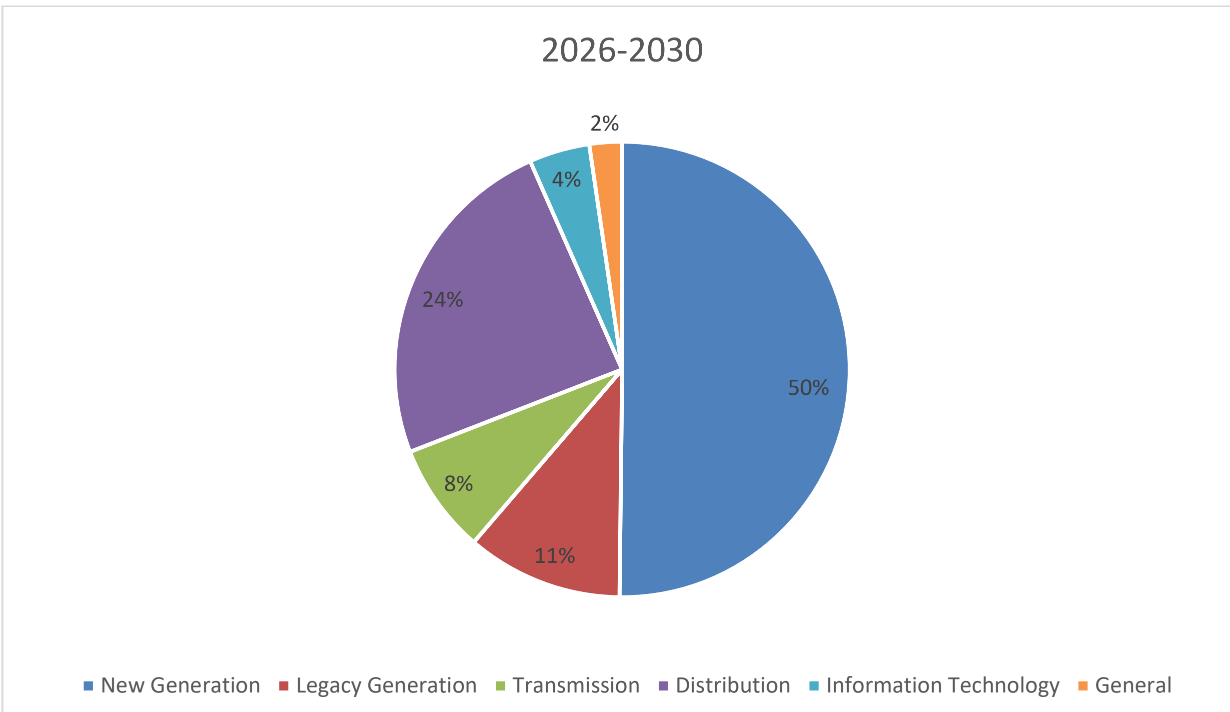
PLANNED SPENDING ON DISTRIBUTION

Q. What does EMM plan to spend on distribution going forward?

A. EMM's 2026 Capital Investment Plan includes investment in its distribution facilities totaling $923 million from 2026-2030, as shown on the following page:[15]

[13] Schedule PJA-2 part 7
[14] Mr. Alvarez Direct Testimony Page 6
[15] EO-2019-0047 - Item 59

Category ($ In Millions)	2026 Projected	2027 Projected	2028 Projected	2029 Projected	2030 Projected	2026–2030
New Generation	204	308	333	557	508	**1,909**
Legacy Generation	80	87	80	95	80	**423**
Transmission	56	57	51	54	79	**297**
Distribution	226	191	165	170	171	**923**
Information Technology	30	35	35	36	29	**164**
General	22	15	18	15	18	**88**
Total	**619**	**692**	**682**	**926**	**885**	**3,804**



Investment in distribution accounts for 24% of EMM's total Capital Investment plan for 2026-2030. Although Staff is not recommending a disallowance of previous distribution investment, it is important to ensure that there are not more cost-effective ways of increasing customer reliability besides preventative asset replacement. This could be done by performing a cost benefit analysis of each of EMM's investment programs, outside of Assetlens using weightings and assumptions which Staff could review and comparing the analyses to determine what the most prudent investments are to improve customer reliability.

CONCLUSION

Q. What do you conclude?

A. Vegetation is one of EMM's leading causes for equipment failure, but Mr. Mulvany did not mention ways in which it could reduce customer outages through vegetation management. Staff recommends that the Commission order EMM to fully comply with Commission rule 20 CSR 4240-23.030(9)(A)5 and conduct a cost-benefit analysis comparison for increasing vegetation management versus investing in additional funds in the lateral improvement program before investing additional dollars in its lateral improvement program.

Q. Does this conclude your rebuttal testimony?

A. Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Evergy Metro, Inc. d/b/a Evergy Missouri Metro's Request for Authority to Implement a General Rate Increase for Electric Service	))))	Case No. ER-2026-0143

AFFIDAVIT OF MALACHI BOWMAN

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW MALACHI BOWMAN and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Rebuttal Testimony of Malachi Bowman*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

MALACHI BOWMAN

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 6th day of August 2026.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: April 04, 2029
Commission Number: 12412070

Notary Public