

Exhibit No.: _____

Issue(s): Reliability Metrics & Investments,
Infrastructure Inspections, Worst Performing
Circuits, PISA Project Support, Recovery of
Non-AMI Investments

Witness: Jeffery Westfall

Type of Exhibit: Surrebuttal Testimony

Sponsoring Party: The Empire District

Electric Company d/b/a Liberty

Case No.: ER-2024-0261

Date Testimony Prepared: September 2025

**Before the Public Service Commission
of the State of Missouri**

Surrebuttal Testimony

of

Jeffery Westfall

on behalf of

The Empire District Electric Company d/b/a Liberty

September 17, 2025



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THE EMPIRE DISTRICT ELECTRIC COMPANY D/B/A LIBERTY
BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION
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1 **I. INTRODUCTION**

2 **Q. Please state your name and business address.**

3 A. My name is Jeffery Westfall. My business address is 602 S. Joplin Ave, Joplin,
4 Missouri 64801.

5 **Q. Are you the same Jeffery Westfall who provided direct and rebuttal testimony in**
6 **this matter on behalf of The Empire District Electric Company d/b/a Liberty**
7 **(“Liberty” or the “Company”)?**

8 A. Yes.

9 **Q. What is the purpose of your surrebuttal testimony in this proceeding before the**
10 **Missouri Public Service Commission (“Commission”)?**

11 A. The purpose of my surrebuttal testimony is to respond to points raised by the rebuttal
12 testimony of Staff witness Claire Eubanks regarding reliability metrics, infrastructure
13 inspections, and worst performing circuits; Office of Public Counsel (“OPC”) witness
14 Jordan Seavers’ comments on reliability metrics and investments, the corporate-wide
15 renewable transition policy, and disallowance of rate base inclusion for projects
16 exceeding \$1 million; and OPC witness Dr. Geoff Marke’s comments on PISA project
17 support. Finally, I address the testimony of OPC witness John A. Robinett related to
18 the recovery of the Company’s stranded meter investments.

19 **II. RESPONSE TO STAFF WITNESS EUBANKS – RELIABILITY METRICS**

20 **Q. What concerns did Ms. Eubanks raise in her rebuttal testimony regarding**
21 **Liberty’s compliance of reliability metrics?**

1 A. Ms. Eubanks recommended the Company file a variance to permit the use of the most
2 recent version of the Institute of Electrical and Electronics Engineers (IEEE) Standard
3 1366-2022, Guide for Electric Power Distribution Reliability Indices, whereas the
4 Commission's rule requires use of the 2003 version of the standard. Ms. Eubanks also
5 recommends the Company request a variance to allow for the reporting of its reliability
6 improvement program on the same day of its capital investment plan filing to ensure
7 the filings are consistent.

8 **Q. Do you agree with Ms. Eubank's recommendations?**

9 A. Yes. I agree that the Company should file a variance request to permit the use of the
10 most recent version of the IEEE 1366 standard for calculating reliability metrics.
11 However, it should be noted that the most recent version (2022) of the IEEE 1366
12 standard maintains the same formulas and guidance as it relates to calculating electric
13 reliability performance metrics as defined within IEEE 1366-2003 defined in the
14 Commission's rule. Therefore, Liberty's reliability performance metrics have not and
15 will not change as a result of this variance.

16 I also agree that the Company should file a variance request to align the filings
17 for the capital investment plan and the reliability improvement program to ensure
18 alignment between the filings.

19 **III. RESPONSE TO OPC WITNESS SEAVER – RELIABILITY PERFORMANCE**

20 **Q. Did Mr. Seaver reach a conclusion regarding the Company's 2013 through 2023**
21 **reliability performance?**

22 A. Yes, Mr. Seaver indicates the System Average Interruption Duration Index (SAIDI)
23 and System Average Interruption Frequency Index (SAIFI) metrics "changes only

1 slightly or does not change at all.” Additionally, Mr. Seaver indicates the SAIDI and
2 SAIFI metrics are “lower in 2023 than they were in 2013, but not by very much.”¹

3 **Q. Do you agree with Mr. Seaver’s assessment of the long-term reliability metrics?**

4 A. No. The Company reduced the annual number of Customer Minutes Interrupted (CMI)
5 by 4,608,644 minutes resulting in an annual SAIDI improvement of 25.74 minutes
6 which is a 17.6% improvement for the 10-year period. The annual number of
7 Customers Interrupted (CI) was reduced by 43,329 resulting in an annual SAIFI
8 improvement of 0.242 which is an 18.7% improvement for the 10-year period. The
9 SAIDI metric improvement indicates the average Missouri Liberty customer
10 experiences almost 26 minutes less of interruption each year. The SAIFI metric
11 improvement indicates that over 43,000 Missouri customers now avoid an interruption
12 each year. The Company has diligently pursued reliability improvement for its
13 customers and believes the 10-year improvement is significant. A summary of the 10-
14 year reliability improvement is provided in the table below.

Metric	2013	2023	Metric Change	% Change	Interruptions Avoided
SAIDI	146.36	120.62	-25.74	-17.6%	4,608,644 Minutes
SAIFI	1.296	1.054	-0.242	-18.7%	43,329

15 **Q. Mr. Seaver indicated that the reliability metrics should not have increased “given**
16 **the significant expenses for transmission and distribution projects during those**
17 **years and in the prior two years.” Do you agree with Mr. Seaver’s conclusion?**

18 A. No, electric reliability performance can be highly variable from year to year due to
19 external factors beyond the utility’s control (e.g. weather, acts of man, etc.) and requires

¹ Rebuttal testimony of Jordan Seaver, Case No. ER-2024-0261, p. 5.

1 a long-term approach to evaluate benefit from investment. Mr. Seaver has chosen to
2 focus only on the brief period from 2020 to 2023 to assess benefit from the immediate
3 investment rather than on the long-term improvement to reliability.

4 **Q. Does the Company's asset investment only affect assets that have experienced an**
5 **outage?**

6 A. No, the Company also invests in assets to replace those which have reached the end of
7 their useful service life. The affected assets may or may not have experienced an
8 interruption affecting customers prior to the decision to replace the asset. Therefore,
9 these investments may serve to mitigate a device with a high reliability risk rather than
10 to remediate an interruption. As a result, the asset investments may or may not
11 demonstrate an immediate benefit in annual reliability metrics.

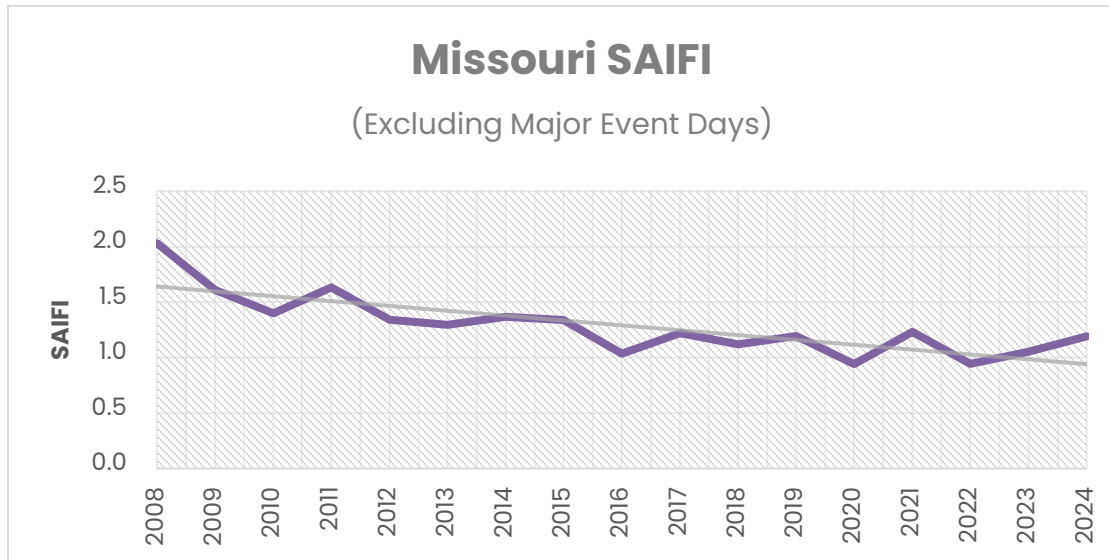
12 **Q. Mr. Seaver contrasted the SAIFI and SAIDI values presented in the Company's**
13 **2016 Integrated Resource Plan ("IRP") with the 2023 and 2024 reliability**
14 **performance metrics and suggested the reliability metrics for 2010 through 2015**
15 **were "considered bad enough to be in need of significant investment in**
16 **distribution upgrades, and the recent scores are not significantly lower."**² **Is that**
17 **a correct characterization?**

18 A. No, it is advisable to assess the performance of the 10-year investment of Operation
19 Toughen-Up over a long-term period rather than a limited number of years. The graphs
20 below for the period 2008 through 2024 demonstrate the initial need for reliability
21 improvement prior to Operation Toughen-Up's implementation and the resulting
22 benefit of the Company's many reliability investments, including Operation Toughen-
23 Up. Missouri customers experienced a significant overall improvement of 41.4% in

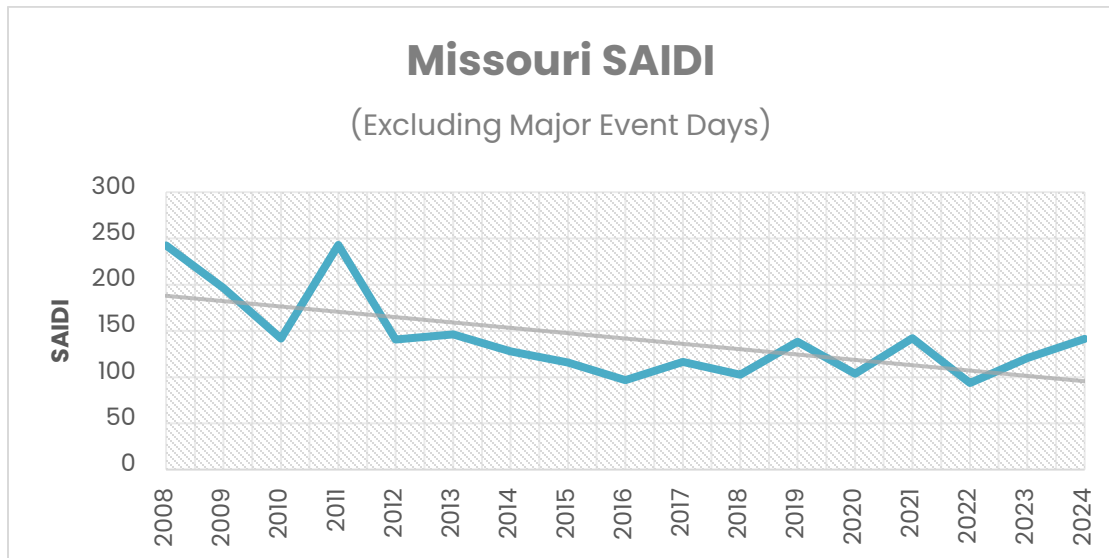
² Rebuttal testimony of Jordan Seaver, Case No. ER-2024-0261, p. 7.

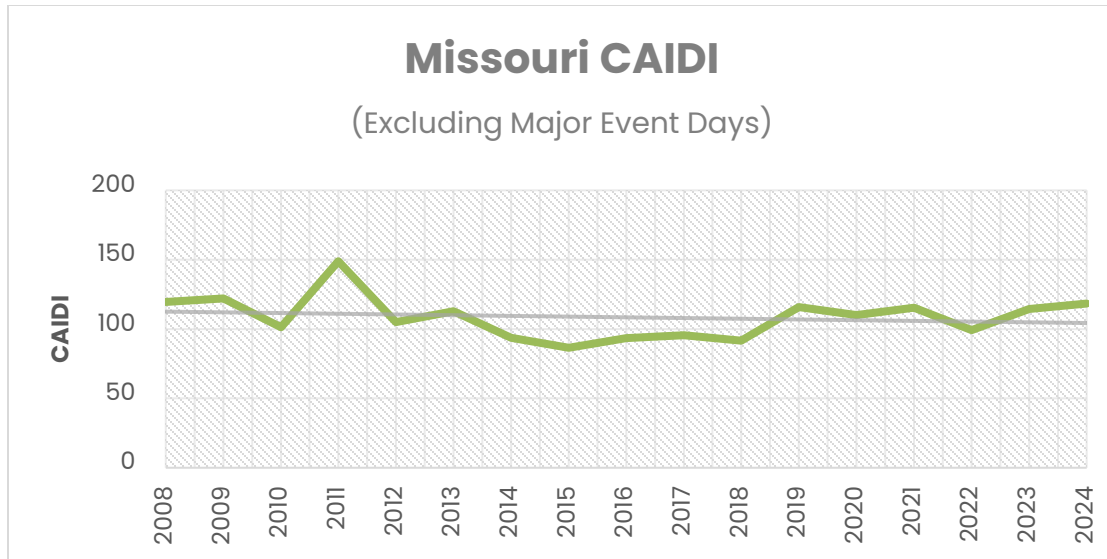
1 SAIFI (2.030 to 1.190) and significant overall improvement of 41.6% for SAIDI
2 (242.45 to 141.48). Missouri customer CAIDI was maintained overall with a very slight
3 (1%) improvement (119.45 to 118.29).

4



5





1
2 **Q. Mr. Seaver notes that the 2023 and 2024 reliability metrics have increased and are**
3 **above the established reliability goals for Operation Toughen-Up. Can you**
4 **explain why?**

5 A. Operation Toughen-Up projects were primarily selected to reduce reliability risk rather
6 than remediate an identified defect causing reliability issues. As a result, the benefit
7 from a given investment may not be immediately reflected in annual performance
8 metrics upon completion of a project. Additionally, the resulting benefit from
9 investment may not be observed in each year. However, the mitigated risk provides a
10 realized benefit to affected customers when all future interruptions occur throughout
11 the life of the assets. It should be noted that twice within the past five years, 2020 and
12 2022, Missouri customers experienced reliability performance very near or better than
13 the Operation Toughen-Up goals of a SAIFI of no greater than 1.00 and a SAIDI of no
14 more than 100. The 2020 and 2022 SAIDI were 0.941 and 0.943, respectively. The
15 2020 and 2022 SAIFI were 103.54 and 93.63, respectively.

16 **Q. Mr. Seaver recommends the Commission impose a 2% disallowance on**
17 **distribution and transmission projects exceeding \$1 million undertaken since the**

1 **Company's last rate case. Mr. Seaver asserts that the disallowance is appropriate**
2 **in recognition of what he characterized as frequent outages, voltage problems,**
3 **issues related to the Customer First Program, and an alleged failure of**
4 **distribution and transmission investments. Does the Company agree with Mr.**
5 **Seaver's proposal?**

6 A. The Company strongly disagrees with the proposal to disallow 2% of investment into
7 distribution and transmission assets. The suggested 2% disallowance is arbitrary,
8 lacking analytical basis or cost-of-service justification. Mr. Seaver has failed to identify
9 a distribution or transmission investment greater than \$1 million that was imprudently
10 selected, poorly executed, or failed to meet its intended purpose. Instead, Mr. Seaver is
11 relying on generalized observations of reliability outcomes and customer service
12 challenges that do not constitute evidentiary findings of imprudent capital spending of
13 distribution and transmission investments.

14 Mr. Seaver's argument improperly conflates short-term reliability outcomes
15 with the prudence of capital investment. Reliability indices can fluctuate significantly
16 from year to year due to factors beyond the Company's control, including weather
17 events, vegetation growth cycles, acts of man, and customer usage patterns. A snapshot
18 of one to two years of performance data does not demonstrate that the Company's
19 investments were unnecessary or ineffective. Furthermore, operational challenges
20 related to the Customer First program, while important, are not directly tied to the
21 prudence of distribution and transmission investments. The customer service
22 challenges associated with the Customer First program are appropriately addressed
23 through customer service and operational initiatives, not through an arbitrary
24 disallowance of capital costs.

1 The Company's distribution and transmission projects are designed to deliver long-
2 term benefits by modernizing infrastructure, reducing outage risk, supporting load
3 growth, and improving system resiliency. The benefits of these investments are realized
4 over a multi-year horizon and provide the foundation for future reliability
5 improvements. Disallowing recovery of a portion of these costs based on an arbitrary
6 percentage would penalize the Company for making prudent investments that were
7 necessary to meet customer needs.

8 For the reasons discussed above, the Company respectfully recommends the
9 proposal of a 2% disallowance for distribution and transmission capital investments be
10 rejected. The proposal is arbitrary, unsupported by evidence, inconsistent with
11 prudence standards, and contrary to the public interest in ensuring continued
12 investment in safe and reliable electric service.

13 **Q. In Mr. Seaver's rebuttal testimony, he notes that unlike prior years, the 2025 PISA**
14 **Report omits any reference to the Clean Transition Plan ("CTP"), suggesting the**
15 **Company has discontinued it. Does the omission reasonably indicate that the**
16 **Company has abandoned the CTP?**

17 A. While Mr. Seaver is correct in asserting that the 2025 PISA Report does not explicitly
18 reference the CTP, this omission does not signal that the Company has abandoned the
19 strategic priorities previously associated with it. Rather, the Company refined the way
20 it communicates its investment strategy, using updated terminology that continues to
21 reflect long-standing objectives such as grid modernization, automation, and system
22 resiliency – all of which are essential to delivering safe and reliable electric service.
23 The 2022-2024 PISA reports linked these priorities directly to the CTP framework. In
24 contrast, the 2025 PISA Report presents a forward-looking investment summary

1 totaling approximately \$2.17 billion over the next five years across eight defined
2 categories. These categories represent Liberty’s long-term planning estimates for
3 electric infrastructure investment in the Central Region. It’s also worth noting that
4 certain renewable integration projects previously emphasized under the CTP have now
5 been completed or are well underway, which naturally shifts the focus of future
6 investment planning. Additionally, the 2025 PISA Report no longer includes the
7 Customer First initiative, which was one of nine categories in the 2024 filing – further
8 illustrating the Company’s evolving approach to prioritizing capital deployment. In
9 summary, while the terminology has changed, the strategic direction remains firmly
10 rooted in modernizing the grid, enhancing automation, and maintaining a resilient
11 electric system to better serve our customers.

12 **Q. Mr. Seaver notes that the PISA filing is not specific to Missouri and rather for the**
13 **entirety of the Central Region, please explain why Missouri is not specifically**
14 **differentiated.**

15 A. The Company operates as an integrated multi-state grid serving four states. The 2025
16 PISA report states, “While this infrastructure is predominantly located in Missouri,
17 serving Missouri residents, the Central Region also operates electric infrastructure and
18 serves electric customers in Kansas, Arkansas, and Oklahoma. Liberty’s capital
19 investment plan addresses electric infrastructure for Liberty’s entire Central Region,
20 not just for the state of Missouri.”³ While Missouri is the anchor of the Central Region
21 and the customers are the largest share of load and infrastructure including major
22 substation, transmission lines, and generation replacements, the electric system does
23 not stop at state borders. Transmission and reliability are inherently regional due to

³ 2025 PISA Annual Report, p. 5, Case No. EO-2019-0046.

1 membership of Southwest Power Pool, which plans transmission across state lines,
2 reliability events affecting cross-border assets and customers, and federal cost
3 allocation which is dependent on regional participation. While the PISA annual reports
4 are compiled at a regional level because the grid is integrated and must be planned
5 regionally for reliability, resiliency, and compliance, the project accounting and cost
6 recovery is performed at the state level to ensure that Missouri, Kansas, Oklahoma, and
7 Arkansas customers do not subsidize other states' infrastructure. When projects are
8 multi-state or regional such as SPP transmission upgrades, Missouri's portion is
9 allocated using the Open Access Transmission Tariff ("OATT") rules and procedures.

10 **Q. Mr. Seaver specifically cites in his testimony a Missouri customer that has**
11 **experienced outage and voltage issues. The customer has filed comments in this**
12 **case and spoke at a local public hearing and would switch electric provider if able**
13 **to do so. Has the Company addressed the concerns of the customer?**

14 A. The Company respectfully acknowledges the concerns raised by Mr. Randall Barker
15 regarding service reliability and voltage fluctuations in his area. While individual
16 customer experiences are not used to calculate system-wide reliability metrics such as
17 SAIDI, SAIFI, and CAIDI, they are nonetheless vital indicators of localized
18 performance challenges. Mr. Barker's concerns align with known infrastructure
19 limitations in portions of Liberty's Missouri service territory, which the Company is
20 actively addressing through targeted capital investments. Projects such as the Wanda
21 Substation rebuild, the Tipton Ford Substation upgrade, and ongoing distribution
22 automation initiatives are specifically designed to improve reliability and voltage
23 stability in the affected areas. These efforts demonstrate Liberty's commitment to
24 listening to its customers and responding with meaningful, data-driven solutions that

1 will result in measurable improvements for Mr. Barker and all Missouri customers. In
2 response to OPC data request 2517, the Company submitted requested records detailing
3 electric service issues including outages, voltage irregularities, and customer
4 complaints within zip codes 64850 and 64865 from January 1, 2023 through the
5 present. The data spans two systems due to a transition in our outage management
6 platforms consisting of the Outage Management System (“OMS”) and the Advanced
7 Distribution Management System (“ADMS”). For each reported issue, the Company
8 has taken appropriate steps to investigate and validate customer concerns, dispatch
9 crews for field inspection and repairs, monitor equipment performance and outage
10 patterns, communicate directly with affected customers, and implement infrastructure
11 improvements where necessary.

12 **IV. RESPONSE TO STAFF WITNESS EUBANKS – INFRASTRUCTURE**
13 **INSPECTIONS**

14 **Q. On page 10, lines 7-10, Ms. Eubanks’s rebuttal testimony indicates the Company**
15 **provided a recovery plan regarding its incomplete 2024 infrastructure**
16 **inspections. Can you provide an update on the progress of this recovery plan?**

17 A. Yes, the Company has now completed 84% of the previously incomplete 2024
18 infrastructure inspections. Liberty has completed 88% of the 2024 infrastructure
19 inspections for its distribution assets and 21% of its 2024 infrastructure inspections of
20 transmission assets. Resources are scheduled and on-track to complete the remaining
21 inspections in calendar year 2025.

22 **Q. Has this delay in the 2024 infrastructure inspections created a delay in the 2025**
23 **infrastructure inspections?**

1 A. No, the 2025 infrastructure inspections are proceeding as originally scheduled. The
2 Company has already completed 32% of its 2025 infrastructure inspections. The
3 Company has worked with its infrastructure inspection vendors to schedule resources
4 to complete these inspections in calendar year 2025 and continues to remain on
5 schedule.

6 V. **RESPONSE TO STAFF WITNESS EUBANKS – WORST-PERFORMING**
7 **CIRCUITS**

8 Q. **On page 6, lines 1-3, Ms. Eubanks’s rebuttal testimony recommends that Liberty**
9 **should focus attention on reducing the duration of outages and improving the**
10 **reliability of its worst-performing circuits. Can you provide details regarding how**
11 **the Company addresses circuit performance issues?**

12 A. Yes, the Company utilizes multiple techniques to address circuit performance issues
13 based on historical performance, severity of impact, prior investments to improve
14 reliability, and underlying cause. Typically, an engineering analysis is performed to
15 review multiple years of outage data to understand the most impactful causes. The
16 analysis then guides engineers in developing and implementing the most appropriate
17 solution. An example of the various solutions includes reliability-based vegetation
18 clearing, circuit sectionalization, protection coordination, additional fault indication,
19 installation of insulating animal guards, replacement of defective equipment, and most
20 recently, installation of distribution automation as a part of Project Distribution
21 Automation (“Project DA”).

22 Q. **Is the Company planning to install distribution automation on all of the 2024**
23 **worst-performing circuits?**

1 A. No, the Company must evaluate each circuit independently for distribution automation
2 to ensure it is a suitable candidate and provides appropriate benefit for customers.
3 While distribution automation reduces overall reliability risk for each circuit on which
4 it is implemented, there are physical requirements which must be met for each circuit.
5 However, Liberty is currently scheduled to evaluate approximately 75% of the 2024
6 worst-performing circuits for distribution automation implementation.

7 **VI. RESPONSE TO OPC WITNESS DR. MARKE - COST-BENEFIT ANALYSIS**
8 **FOR PISA INVESTMENTS**

9 **Q. On page 16, lines 15-21, of his rebuttal testimony, Dr. Marke expresses his**
10 **concerns regarding the Company's ability to comply with its commitments as they**
11 **related to cost-benefit analysis for PISA investments. Can you provide an update**
12 **on the Company's progress?**

13 A. Yes, the Company implemented ENGIN, an asset investment planning software
14 application, as the Company's Cost-Benefit Analysis Automation Tool (CBAT) in
15 2024 to aid in the overall management of transmission and distribution assets. ENGIN
16 allows engineers to perform a cost-benefit analysis of proposed investments as well as
17 identify other potential opportunities to invest in asset renewal and better manage
18 overall risk. The Company's asset risk management department utilizes ENGIN and
19 supported the quantitative cost-benefit analysis discussion within Exhibit 4 of the
20 Company's 2025 PISA Report.

21 **Q. Does this conclude the activity required to support the Company's CBAT**
22 **implementation?**

23 A. No, the Company is currently performing a field data collection of its overhead
24 distribution and transmission assets to obtain updated condition data to support the

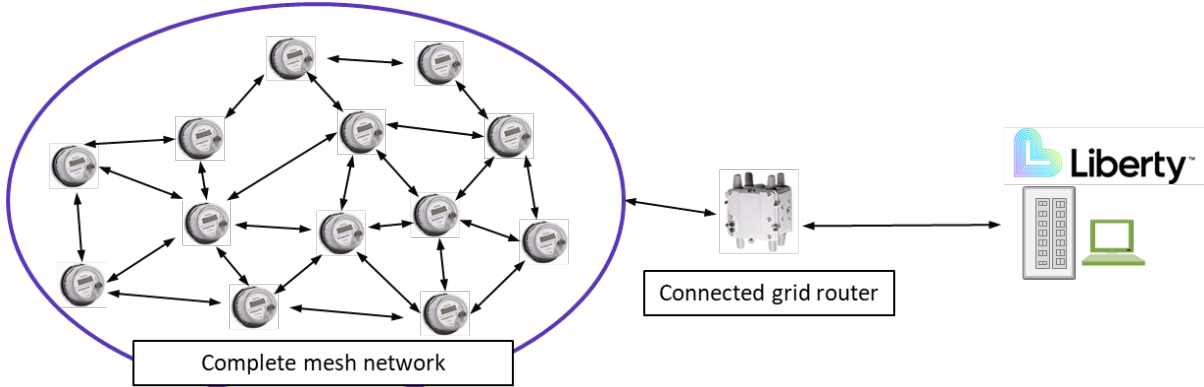
1 quantitative risk-based cost-benefit analysis within ENGIN. As the Company
2 previously reported in response to OPC data request 2511, the Company has aligned
3 its overhead infrastructure inspection program and the field data collection to minimize
4 the cost impact to Missouri customers.

5 **VII. RESPONSE TO OPC WITNESS ROBINETT – STRANDED METER**
6 **RECOVERY**

7 **Q. Does the Company agree with OPC regarding not allowing the Company to earn**
8 **a return on its stranded meters?**

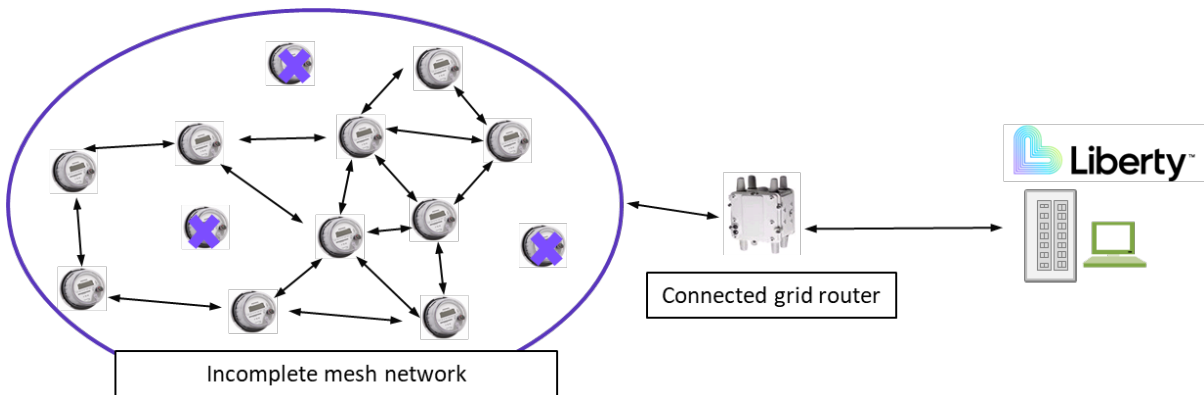
9 A. No. The Company carefully designed and planned its AMI system in 2019 and began
10 installing the system by sectors. Moving through the Company's territory by sector
11 allowed the Company to replace all in-scope meters in an area before moving onto the
12 next. This was a more efficient approach than skipping the undepreciated meters in
13 sectors, and then travelling all over the service territory to replace those meters ad hoc
14 as they depreciate. Additionally, the AMI solution implemented by the Company relies
15 on a mesh network. This means that each meter in the system acts as a repeater and
16 forms a mesh network that communicates with the Company's meter data management
17 system. When all the meters in a sector are AMI meters, they work in concert with
18 each other to create a strong mesh network of two-way communication between the
19 customers and the Company, as demonstrated in Figure 1 below.

Figure 1: Complete AMI mesh network



However, if the Company were to only replace fully depreciated meters, there would be fewer AMI meters to act as repeaters, and the resulting mesh network would be weaker than the one described above. With reduced overlapping coverage, there is great risk of meters becoming stranded and unable to communicate with the Company.

Figure 2: Incomplete AMI mesh network



Furthermore, if, for the sake of argument, the Company only replaced fully depreciated meters, this would have prevented some of the Company's customers from realizing the benefits of the AMI system at the same time as their neighboring customers, even though they are paying for a portion of the AMI implementation. The Company strongly believes all customers should be able to access the benefits of the AMI meters. Further, from an operational standpoint, the Commission should reject OPC's positions in respect to not allowing the Company to earn a return on its stranded meters because

1 customers are benefitting from the replacement of outdated meters with AMI meters.
2 Finally, the Company prudently chose to replace as many old meters as possible to
3 maintain the integrity of the AMI mesh network, meaning that it was necessary for the
4 Company to replace the old meters before they were fully depreciated and reached the
5 end of their useful lives.

6 **VIII. CONCLUSION**

7 **Q. Does this conclude your surrebuttal testimony at this time?**

8 **A. Yes.**

VERIFICATION

I, Jeffery Westfall, under penalty of perjury, on this 17th day of September, 2025,
declare that the foregoing is true and correct to the best of my knowledge and belief.

/s/ Jeffery Westfall