

ATTACHMENT 9 and 3: RES RETAIL RATE IMPACT

2026 RES Retail Rate Impact (“RRI”) Filing

The Empire District Electric Company (“Liberty-Empire”) filed its 2025 Missouri triennial Integrated Resource Plan (“2025 IRP”) on April 1, 2025 in File No. EO-2024-0280. Liberty-Empire has submitted its 2026 IRP Annual Update Report compliance filing (“2026 IRP Annual Update Report”) in File No. EO-2026-0230 on March 13, 2026, consistent with 4 CSR 4240.100. Liberty-Empire’s 2026 IRP Annual Update reviews the 2025 IRP preferred plan and the steps the Company has taken toward implementation since the filing of the 2025 IRP.

As further described in the Notice of Change in Preferred Plan filed in October 2025, and to be described in the 2026 IRP Annual Update, Liberty-Empire expects a change to the preferred plan with cancellation of the 175 MW solar project originally expected for 2028. Furthermore, Liberty-Empire intends no increase in DSM programs, and will extend the Elk River wind PPA until 2030. These changes are structural in nature and will impact all Liberty-Empire portfolios.

Liberty-Empire’s 2026 RES RRI analysis contained herein calculates the retail rate impact (“RRI”) on an incremental basis for each planning year based on procurement or development of renewable energy resources averaged over the next ten (10) years. The RES RRI is calculated by subtracting the total retail revenue requirement incorporating an incremental non-renewable generation and purchased power portfolio from the total retail revenue requirement including an incremental RES-compliant generation and purchased power portfolio.

Section 5(B) of the Rule states that the non-renewable generation and purchase power portfolio shall be determined by adding, to the utility’s existing generation and purchased power resource portfolio excluding all renewable resources, additional non-renewable resources sufficient to meet the utility’s needs on a least-cost basis for the next ten (10) years. Consistent with the Rule, Liberty-Empire defined the non-renewable generation and purchased power portfolio (“Plan 1 – No RES”) ¹ as the utility’s existing generation and purchased power resource portfolio excluding all renewable resources except those owned or contracted prior to September 30, 2010, ² plus additional non-renewable resources sufficient to meet the utility’s needs on a least-cost basis for the next ten years. To develop the Plan 1 – No RES portfolio, Liberty-Empire removed the following renewable resources from Liberty-Empire’s existing portfolio:

| Resource Name | Resource Type | ICAP MW by 2044 |
|----------------------|----------------------|------------------------|
| Neosho Ridge | Wind | 301 |
| North Fork Ridge | Wind | 149 |
| Kings Point | Wind | 149 |

¹ The original 2025 IRP Plan 1 which forms the basis for this Plan was modified according to the structural changes outlined in the Notice of Change in Preferred Plan filed in October 2025, and as described in the 2nd paragraph of this memo – removal of new 175 MW solar in 2028, no further increase in DSM, and extension of Elk River PPA to 2030.

² Pursuant to Rule Section 5(A), because the Ozark Beach hydro facility, the Meridian Way Windfarm PPA and the Elk River Windfarm PPA were all owned or contracted prior to September 30, 2010, they were kept in the non-renewable generation and purchase power portfolio.

To maintain a minimum capacity margin³ over the modeling horizon, 200 MW natural gas aeroderivative (“aero”) combustion turbine (“CT”) capacity was added in 2026, 27 MW of small industrial natural gas CT was added in 2027, 100 MW of natural gas aero CT was added in 2029, 50 MW of natural gas aero CT was added in 2031, 50 MW of natural gas aero CT was added in 2033, 240 MW of natural gas frame CT was added in 2036, 50 MW of natural gas aero CT was added in 2041, and 40 MW of natural gas distributed reciprocating engine was added across the 2040-2044 time frame.

Rule 5(B) states that the RES-compliant portfolio shall be determined by adding to the utility’s existing generation and purchased power resource portfolio an amount of least cost renewable resources sufficient to achieve RES requirements and an amount of least-cost non-renewable resources, the combination of which is sufficient to meet the utility’s needs for the next ten (10) years. Because Liberty-Empire’s existing portfolio including all renewable resources already more than achieves RES requirements, Liberty-Empire added to the current existing portfolio a least-cost amount of non-renewable resources (“Plan 1”)⁴. To maintain a minimum capacity margin⁵ over the modeling horizon, Plan 1 adds 27 MW of small industrial natural gas CT in 2027, 150 MW of natural gas aero CT was added in 2029, 50 MW of natural gas aero CT was added in 2031, 50 MW of natural gas aero CT was added in 2033, 240 MW of natural gas frame CT was added in 2036, 50 MW of natural gas aero CT was added in 2041, and 40 MW of natural gas distributed reciprocating engine was added across the 2040-2044 time frame. Relative to Plan 1 – No RES, Plan 1 also includes 600 MW wind already operating since 2020-2021.

Rule Section 5(B)4 states that the assumptions for this filing should utilize the most recent electricity utility resource planning analysis. Liberty-Empire used power market prices, natural gas fuel prices, and emissions prices from its most recent electric utility resource planning analysis assumptions. Consistent with the 2025 IRP, a 40% probability weighting was given to the Low carbon emissions cost scenario and a 40% probability weighting was given to the Base carbon emissions cost scenarios. A third emissions cost scenario with a 20% probability weighting was represented by implementation of the EPA’s GHG rule.⁶

Table 1 includes the expected value of costs associated with carbon emissions used in this analysis. Figure 1 includes forecast power prices for the EDE_EDE load node with impacts for the three emissions cost cases.

³ The 2025 IRP analysis applied an accredited capacity (ACAP) resource adequacy construct being implemented by SPP. Based on SPP guidance, installed reserve margin requirements are assumed to increase from 15% in 2024 to 17% by 2029 for summer, and initiated at 36% in 2026 and increasing to 44% by 2029. The construct is still being developed by SPP and could evolve further.

⁴ The original 2025 IRP Plan 1 which forms the basis for this Plan was modified according to the structural changes outlined in the Notice of Change in Preferred Plan filed in October, 2025, and as described in the 2nd paragraph of this memo – removal of new 175 MW solar in 2028, no further increase in DSM, and extension of Elk River PPA to 2030.

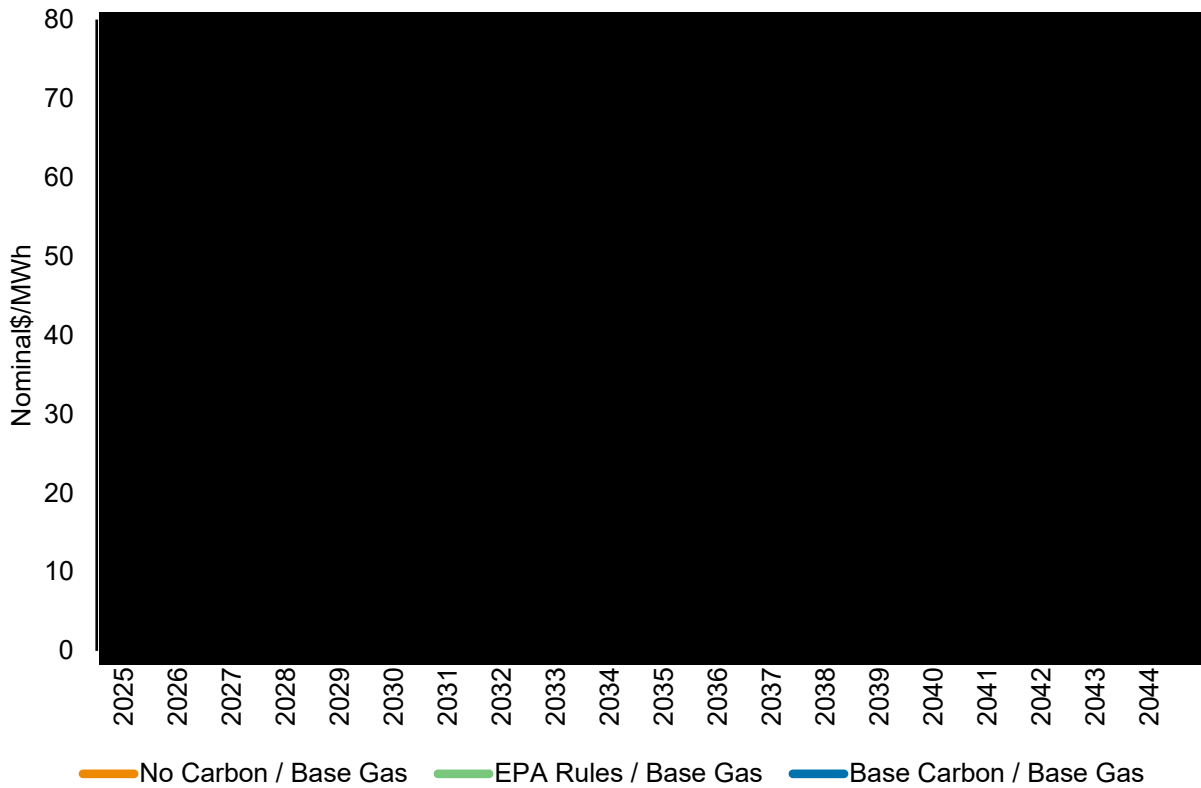
⁵ See note 4

⁶ The EPA GHG rule scenario involves retiring all coal units by 2032 while capping any new combined cycle gas turbine and single cycle gas turbine units at 40% and 20% capacity factor, respectively.

Table 1 - Expected Value of Emissions Cost

| Year | Emissions Cost (\$Nom/Short Ton) | | EPA Rules – 20% |
|------|----------------------------------|-------------------|---|
| | No Carbon - 40% | Base Carbon - 40% | |
| 2025 | - | - | Cost of emissions implied in power price impacts resulting from early coal retirements and limited running time for new gas plants. |
| 2026 | - | - | |
| 2027 | - | - | |
| 2028 | - | - | |
| 2029 | - | - | |
| 2030 | - | - | |
| 2031 | - | - | |
| 2032 | - | - | |
| 2033 | - | - | |
| 2034 | - | - | |
| 2035 | - | - | |
| 2036 | - | - | |
| 2037 | - | - | |
| 2038 | - | - | |
| 2039 | - | - | |
| 2040 | - | - | |
| 2041 | - | - | |
| 2042 | - | - | |
| 2043 | - | - | |
| 2044 | - | - | |

Exhibit 2 - EDE Annual Average Power Prices



Results:

The following table shows the calculation for the average 10-year compliance spend over the 10-year period (2026-2036) as required by Rule 5(B). The RRI Budget is calculated as 1% of the Plan 1 Revenue Requirement. Actual Compliance Spend is calculated as the difference between the PVRRs of Plan 1 – No RES and Plan 1 in each year. As indicated in the table, the average Actual Compliance Spend for the 10-year period exceeds the budgeted 1% RRI for the 10-year period, however, only modestly, and driven primarily by only a couple transitory years (2029, 2030). During this brief period, the Plan 1 portfolio installs additional gas peaking capacity to close small capacity gap. However, by the early 2030's, the additional low variable cost generation from the 600 MW of existing wind substantially improves the market purchase position of Plan 1. Increasing market energy price driven by coal retirements and the escalating price of carbon in the Base case results in materially higher operating costs for the Plan 1 – No RES portfolio relative to Plan 1, due to the higher proportion of thermal gas generation and higher reliance on market purchases. This impact reduces the compliance spend to below 1% for the longer-term horizon.

Exhibit 3: 2026-2035 Annual Revenue Requirements and RES Compliance Spend

| <i>Dollars in millions</i> | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | Total |
|-------------------------------------|------|------|------|------|------|------|------|------|------|------|-------|
| RRI Budget (2026-2035) | | | | | | | | | | | |
| Actual Compliance Spend (2026-2035) | | | | | | | | | | | |
| Revenue Requirement (2026-2035) | | | | | | | | | | | |
| Budget (% of RR) | | | | | | | | | | | |
| Actual Compliance Spend (% of RR) | | | | | | | | | | | |

The following tables summarize the Retail Rate Impact calculation, including the annual carry-forward amount required by Rule 5(G).

Exhibit 4: 2026-2035 RRI Calculation Period

| 2026-2035 RRI Calculation Period | | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 10-Year | Cumulative |
|----------------------------------|-------------------------------------|------------|------|------|------|------|------|------|------|------|------|---------|------------|
| | Baseline Revenue Requirement (\$MM) | [REDACTED] | | | | | | | | | | | |
| | Annual 1% (\$MM) | [REDACTED] | | | | | | | | | | | |
| | | [REDACTED] | | | | | | | | | | | |
| | Actual Costs of Compliance | [REDACTED] | | | | | | | | | | | |
| | Annual Over (Under) | [REDACTED] | | | | | | | | | | | |
| | Plus Prior Carryover | [REDACTED] | | | | | | | | | | | |
| | Cumulative Carryover | [REDACTED] | | | | | | | | | | | |

Exhibit 5: 2027-2036 RRI Calculation Period

| 2027-2036 RRI Calculation Period | | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 10-Year | Cumulative |
|----------------------------------|-------------------------------------|------------|------|------|------|------|------|------|------|------|------|---------|------------|
| | Baseline Revenue Requirement (\$MM) | [REDACTED] | | | | | | | | | | | |
| | Annual 1% (\$MM) | [REDACTED] | | | | | | | | | | | |
| | | [REDACTED] | | | | | | | | | | | |
| | Actual Costs of Compliance | [REDACTED] | | | | | | | | | | | |
| | Annual Over (Under) | [REDACTED] | | | | | | | | | | | |
| | Plus Prior Carryover | [REDACTED] | | | | | | | | | | | |
| | Cumulative Carryover | [REDACTED] | | | | | | | | | | | |

Exhibit 6: 2028-2037 RRI Calculation Period

| 2028-2037 RRI Calculation Period | | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 10-Year | Cumulative |
|----------------------------------|-------------------------------------|------------|------|------|------|------|------|------|------|------|------|---------|------------|
| | Baseline Revenue Requirement (\$MM) | [REDACTED] | | | | | | | | | | | |
| | Annual 1% (\$MM) | [REDACTED] | | | | | | | | | | | |
| | | [REDACTED] | | | | | | | | | | | |
| | Actual Costs of Compliance | [REDACTED] | | | | | | | | | | | |
| | Annual Over (Under) | [REDACTED] | | | | | | | | | | | |
| | Plus Prior Carryover | [REDACTED] | | | | | | | | | | | |
| | Cumulative Carryover | [REDACTED] | | | | | | | | | | | |

Exhibit 7: 2029-2038 RRI Calculation Period

| 2029-2038 RRI Calculation Period | | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 10-Year | Cumulative |
|----------------------------------|-------------------------------------|------|------|------|------|------|------|------|------|------|------|---------|------------|
| | Baseline Revenue Requirement (\$MM) | | | | | | | | | | | | |
| | Annual 1% (\$MM) | | | | | | | | | | | | |
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| | Actual Costs of Compliance | | | | | | | | | | | | |
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| | Annual Over (Under) | | | | | | | | | | | | |
| | Plus Prior Carryover | | | | | | | | | | | | |
| | Cumulative Carryover | | | | | | | | | | | | |

Exhibit 8: 2030-2039 RRI Calculation Period

| 2030-2039 RRI Calculation Period | | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 10-Year | Cumulative |
|----------------------------------|-------------------------------------|------|------|------|------|------|------|------|------|------|------|---------|------------|
| | Baseline Revenue Requirement (\$MM) | | | | | | | | | | | | |
| | Annual 1% (\$MM) | | | | | | | | | | | | |
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| | Actual Costs of Compliance | | | | | | | | | | | | |
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| | Annual Over (Under) | | | | | | | | | | | | |
| | Plus Prior Carryover | | | | | | | | | | | | |
| | Cumulative Carryover | | | | | | | | | | | | |

Exhibit 9: 2031-2040 RRI Calculation Period

| 2031-2040 RRI Calculation Period | | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 10-Year | Cumulative |
|----------------------------------|-------------------------------------|------|------|------|------|------|------|------|------|------|------|---------|------------|
| | Baseline Revenue Requirement (\$MM) | | | | | | | | | | | | |
| | Annual 1% (\$MM) | | | | | | | | | | | | |
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| | Actual Costs of Compliance | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | Annual Over (Under) | | | | | | | | | | | | |
| | Plus Prior Carryover | | | | | | | | | | | | |
| | Cumulative Carryover | | | | | | | | | | | | |

Exhibit 10: 2032-2041 RRI Calculation Period

| 2032-2041 RRI Calculation Period | | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 10-Year | Cumulative |
|----------------------------------|-------------------------------------|------|------|------|------|------|------|------|------|------|------|---------|------------|
| | Baseline Revenue Requirement (\$MM) | | | | | | | | | | | | |
| | Annual 1% (\$MM) | | | | | | | | | | | | |
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| | Actual Costs of Compliance | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | Annual Over (Under) | | | | | | | | | | | | |
| | Plus Prior Carryover | | | | | | | | | | | | |
| | Cumulative Carryover | | | | | | | | | | | | |

Exhibit 11: 2033-2042 RRI Calculation Period

| 2033-2042 RRI Calculation Period | | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 10-Year | Cumulative |
|----------------------------------|-------------------------------------|------|------|------|------|------|------|------|------|------|------|---------|------------|
| | Baseline Revenue Requirement (\$MM) | | | | | | | | | | | | |
| | Annual 1% (\$MM) | | | | | | | | | | | | |
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| | Actual Costs of Compliance | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | Annual Over (Under) | | | | | | | | | | | | |
| | Plus Prior Carryover | | | | | | | | | | | | |
| | Cumulative Carryover | | | | | | | | | | | | |

Exhibit 12: 2034-2043 RRI Calculation Period

| 2034-2043 RRI Calculation Period | | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 10-Year | Cumulative |
|----------------------------------|-------------------------------------|------|------|------|------|------|------|------|------|------|------|---------|------------|
| | Baseline Revenue Requirement (\$MM) | | | | | | | | | | | | |
| | Annual 1% (\$MM) | | | | | | | | | | | | |
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| | | | | | | | | | | | | | |
| | Actual Costs of Compliance | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | Annual Over (Under) | | | | | | | | | | | | |
| | Plus Prior Carryover | | | | | | | | | | | | |
| | Cumulative Carryover | | | | | | | | | | | | |

Exhibit 13: 2035-2044 RRI Calculation Period

| 2035-2044 RRI Calculation Period | | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 | 2044 | 10-Year | Cumulative |
|----------------------------------|-------------------------------------|------|------|------|------|------|------|------|------|------|------|---------|------------|
| | Baseline Revenue Requirement (\$MM) | | | | | | | | | | | | |
| | Annual 1% (\$MM) | | | | | | | | | | | | |
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| | Actual Costs of Compliance | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | Annual Over (Under) | | | | | | | | | | | | |
| | Plus Prior Carryover | | | | | | | | | | | | |
| | Cumulative Carryover | | | | | | | | | | | | |