



2026 PISA Report

Annual Update

The Empire District Electric Company
d/b/a Liberty

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Introduction

This report satisfies the requirements of RSMo. 393.1400 based on the election to Plant in Service Accounting (“PISA”) by The Empire District Electric Company d/b/a Liberty (“Liberty” or the “Company”). This is the 2026 PISA Annual Report which provides an update on the Company’s planned investments and updates the past reports filed in 2021 through 2025 in Missouri Public Service Commission (“Commission”) File No. EO-2019-0046.

This report reflects a snapshot in time of Liberty’s intentions regarding budget plans for the next five years. Organizational priorities and plans are prone to shift based on evolving needs, technology, supply chain issues, and the economic landscape, resulting in adjustments to the reported budget and spending forecast.

- Liberty continuously evaluates and analyzes the needs of its customers and the electric grid, the condition of Liberty’s infrastructure, the costs and accessibility of modern technologies, and the availability of new technologies.
- Liberty continuously strives to make the most of every dollar and every hour of labor, to provide reliable and affordable electric service most efficiently to its customers.
- Liberty will continue to be active and dedicated partners to the customers we serve. Our planned initiatives will enhance reliability and safety while our investments strike a balance between affordability and service quality.
- Additionally, it is important to note that challenges with supply chains for specialty equipment could result in impacts to Liberty’s ability to execute on portions of this investment plan. Procurement leaders are constantly assessing this situation and notifying planners.
- As mentioned, plans are always being re-evaluated and are subject to change.

Liberty’s investment strategy prioritizes affordability alongside reliability and modernization. Every initiative is evaluated to ensure customers receive cost-effective solutions that maintain service quality while minimizing long-term rate impacts.

PISA Agreements from Past Cases

The stipulation and agreement in Commission File No. ER-2021-0312 states that Liberty “will meet with Staff and OPC at least twice regarding ‘parameters and assumptions’ and will provide... cost-benefit analyses and performance metrics for planned capital investments of greater than \$1 million.” Additionally, these metrics and analyses will be updated annually and filed in the Company’s PISA docket. Liberty held its initial meeting with Commission Staff (“Staff”) and Office of the Public Counsel (“OPC”) on September 27, 2022, and a second meeting was held on February 24, 2023.

Liberty’s cost-benefit analyses (“CBA”) and performance metrics for investments that meet the \$1 million threshold are included as Exhibit 4 within the Company’s 2026 PISA Annual Report.



Separately from the settlement commitments, based on the statute, for each project in the specific capital investment plan on which construction commences on or after January 1st of the year in which the plan is submitted (in this case 2026), and where the cost of the project is estimated to exceed \$20 million, a cost benefit statement will be provided as Exhibit 3 within the Company's 2026 PISA Annual Report.

2025 Actual Capital Expenditures

As required by statute, Liberty is submitting Exhibit 1 within the Company's PISA Annual Report which is a detailed account of actual capital investments made in 2025.

Additionally, Liberty is providing, as required by statute, "the quantitatively evaluated benefits and costs generated by each of those investments that exceeded \$20 million, and any efficiencies achieved as a result of those investments." The project that met the \$20 million threshold and went into service in 2025 is included in Exhibit 2 within the Company's 2026 PISA Annual Report.

The Integrated Resource Plan ("IRP")

Liberty filed its most recent triennial IRP in Missouri on April 1, 2025. This IRP was then submitted in Arkansas in July 2025 and will be submitted in Oklahoma in 2026 based on a three-year submission cycle. As required by the Missouri Commission's current Electric Utility Resource Planning Rule (Chapter 22), a full compliance filing is made every three years, and an IRP annual update is prepared and filed in all other years. The Company's next IRP Annual Update report will be filed in Missouri in or around March 2026.

The IRP process results in a target list of resource candidates to serve Liberty's future customer needs. The IRP enables the utility to develop a preferred resource plan and initiate an acquisition strategy. The IRP is a plan, and not all aspects of the plan progress to projects that become a part of Liberty's future capital investment plans. This investment plan includes the next planned resource investments to meet growing customer needs or to replace aging units. Specifically, this plan includes the replacement of a portion of the Riverton generation facility (Riverton Units 13 and 14), scheduled for the 2026 timeframe, and a new combustion turbine now estimated to enter service in the 2030 timeframe. The progress that is being made on these projects will be discussed further herein.

Resource planning is a dynamic process. As noted in the recent IRP filings, conditions in the electric industry continue to evolve. This includes changes to the Southwest Power Pool ("SPP") resource adequacy requirements; the proposed introduction of performance-based accreditation which will be implemented in the near future for traditional generating resources; updated estimates to Effective Load Carrying Capability ("ELCC") ratings for renewable resources; SPP's new Expedited Resource Adequacy Study ("ERAS") - to name just a few notable industry shifts. The Company's 2026 IRP Annual Update, which is still under development, will address these changes as appropriate.



Update to the Preferred Plan

Following the filing of its 2025 IRP, Liberty determined that the Preferred Plan was no longer appropriate as described further below. Consistent with 20 CSR 4240-22.080, Liberty notified the Commission of its determination to update the preferred resource plan on October 15, 2025. The filing included a description of all changes to the Preferred Plan and the Acquisition Strategy, along with all the other requirements specified by the resource planning rule. The primary changes are summarized as follows:

- Remove the 175 MW utility-scale solar project, selected in the 2022 Triennial IRP, from the 2028 timeframe;
- Remove the demand-side programs throughout the planning horizon;
- Update for the newly extended Elk River purchased power agreement (“PPA”) until 2030; and
- In year 2041, near the end of the planning horizon, add more Distributed Reciprocating Internal Combustion Engine (“RICE”) generation to balance the capacity needs.

The 175 MW solar project, originally selected in the 2022 Triennial IRP, slated for the 2028 timeframe will not proceed and is being removed as part of the Preferred Plan change. As stated in the 2025 IRP, “Liberty-Empire will continue the evaluation of approximately 175 MW solar facility due for operation in the 2028 timeframe. However, given the changing dynamics surrounding the SPP’s resource adequacy construct, evolving market dynamics, and the timing of this filing, it is not certain that this project will proceed.” SPP’s shift to a seasonal capacity accreditation construct and significant increase in the winter Planning Reserve Margin (“PRM”), where solar is awarded relatively low levels of winter value, combined with Liberty’s winter peaking nature, was a leading factor in reconsidering the solar project.

The investment plan presented in this PISA report considers the updated preferred plan from the IRP process.

Investment Summary

Liberty’s 2026 investment summary consists of approximately \$2,232.6 million over the next five years across eight categories of investment. These investments represent Liberty’s long-term planning estimates of expected capital investment on the electric infrastructure for Liberty in the Central Region. While this infrastructure is predominantly located in Missouri, serving Missouri residents, the Central Region also operates electric infrastructure and serves retail electric customers in Kansas, Arkansas, and Oklahoma. The Company also provides transmission service through a FERC approved formula rate. Liberty’s capital investment plan addresses electric infrastructure for Liberty’s entire Central Region, not just for the state of Missouri.

This report addresses Liberty’s current plan and estimates for investment in identified projects across these eight strategic areas to affordably modernize its electric



infrastructure. Annually, project and program owners submit progression status and five-year forward-looking budget estimates for evaluation and approval into Liberty's full capital investment plan. The results of this year's approved version for 2026 through 2030 are detailed in the table below. Each year, Liberty will continue to evaluate, adjust, and report this five-year investment plan. As noted, Liberty continuously evaluates and analyzes the needs of its customers and the electric infrastructure, while focusing on affordability, evolving needs, and emerging technology.

2026 Liberty Capital Investment Plan						<i>\$ Millions</i>
Program Name	2026	2027	2028	2029	2030	Total
Solar	\$0.0	\$1.5	\$0.0	\$0.0	\$0.0	\$1.6
Plant Emissions	\$1.3	\$1.6	\$1.7	\$1.8	\$1.8	\$8.2
Transportation Electrification *	\$0.1	\$0.4	\$0.0	\$0.0	\$0.0	\$0.5
Cyber & Technology Upgrades *	\$14.5	\$14.3	\$11.6	\$12.0	\$12.3	\$64.7
Grid Resiliency - Distribution *	\$98.1	\$143.0	\$207.9	\$142.1	\$115.3	\$706.3
Grid Resiliency - Transmission	\$71.5	\$115.4	\$149.6	\$69.8	\$353.6	\$759.9
Generation Optimization	\$42.2	\$77.0	\$70.4	\$32.1	\$38.4	\$260.1
New Thermal Generation *	\$50.4	\$74.2	\$91.9	\$189.1	\$25.7	\$431.2
Total	\$278.1	\$427.5	\$533.2	\$446.7	\$547.1	\$2,232.6
Grid Modernization Subtotal	\$163.1	\$232.0	\$311.4	\$343.1	\$153.2	\$1,202.7
Grid Mod Percentage (%)	59%	54%	58%	77%	28%	54%

This reported investment plan reflects Liberty-Empire's full budget, not just focused on PISA-eligible spend.

This report does not exclude transmission expenditures paid for by parties other than Liberty.

AFUDC is not included in this report and investment plan summary.

Planned costs for retirement projects are not included in this report and investment plan summary.

* Included in the Grid Modernization subtotal.

Minor inconsistencies can occur due to rounding.

Projects are selected based on rigorous cost-benefit analysis to deliver maximum value per dollar invested. This approach ensures that modernization and resiliency improvements are achieved without imposing unnecessary financial burdens on customers. Liberty's capital investment plan is centered around grid modernization investments that affordably optimize operations, automate, and improve the flexibility of the grid, facilitate integration of distributed renewable generation, improve power quality, and increase the use of digital information, the security and safety of the grid, and the grid's resiliency to withstand threats from vegetation and damaging winds and other extreme weather events. The PISA statute specifies that at least 25% of each year's planned investment be for grid modernization projects. As shown in the table above, this level is easily achieved in all five years presented.

Investments in resiliency represent a major portion of Liberty's investment plans and follow examples set by progressive peers in the industry. It is crucial to our communities



that our infrastructure continues to perform even under extenuating circumstances and extreme weather events.

The Southwest Power Pool

According to the SPP website, “SPP is a regional transmission organization (“RTO”): a nonprofit corporation mandated by the FERC to ensure reliable supplies of power, adequate transmission infrastructure and competitive wholesale electricity prices on behalf of its members.” Benefits to SPP Members across parts of the 14 states in the central United States in which they operate include improved reliability, cost savings through regional coordination, and opportunities to buy and sell power across a broad footprint.

Changes to the SPP Reliability Framework

SPP has implemented significant changes to its reliability framework to address growing load and operational challenges and ensure system adequacy under extreme conditions. These updates affect three key metrics: Planning Reserve Margin (“PRM”), Performance-Based Accreditation (“PBA”) for conventional resources, and Effective Load Carrying Capability (“ELCC”) for wind, solar, and energy storage resources. These changes collectively will reshape how utilities plan and procure resources in the future.

SPP’s recent Loss of Load Expectation (“LOLE”) studies revealed that the current 15% planning reserve margin was insufficient for reliability. In response, SPP raised the summer base PRM to 16% starting in the summer season of 2026 and introduced a separate winter requirement of 36% beginning in the winter season of 2026/27. These adjustments reflect the heightened risk of correlated outages during severe winter weather and align with the “one (1) day in ten (10) years” reliability standard of the LOLE study process.

Accreditation for conventional resources now incorporates historical performance data, including forced outages and fuel limitations during critical events. This dynamic approach means accredited capacity will vary annually, incentivizing generators to maintain reliability during periods of stress such as Resource Advisories and Emergency Energy Alerts.

For wind, solar, and energy storage resources, accreditation values are determined by estimating how much additional load the system can reliably serve with that resource while maintaining the reliability standard. ELCC studies now account for catastrophic outage scenarios and Out-of-Management-Control events, ensuring renewable contributions are accurately reflected in peak reliability assessments. This change underscores the need for diversified portfolios and additional firm capacity to meet compliance obligations.

In July 2025, FERC approved SPP’s methodologies for PBA and ELCC, while PRM was approved the following month. FERC’s approval of SPP’s revised reliability framework marks a pivotal step toward strengthening grid resilience in the face of evolving risks. By endorsing higher seasonal reserve margins and dynamic accreditation methodologies, FERC has validated SPP’s proactive approach to resource adequacy. These changes ensure that capacity planning reflects real-world performance and variability, while promoting



diversification and reliability across the generation mix. For stakeholders, this approval underscores the urgency of adapting affordable procurement strategies and enhanced operational practices to meet new compliance standards and maintain system reliability under extreme conditions.

Expedited Resource Adequacy Study “ERAS”

Approved by FERC in July 2025, the ERAS process is a one-time, expedited study process designed to significantly accelerate the interconnection of new generating resources to the grid. This one-time process will run in parallel to but independently of SPP’s standard generator interconnection (“GI”) study queue. Eligibility is limited to new generation nominated by Load Responsible Entities (“LRE”), of a maximum capacity set by a formula using each LREs accredited capacity and the gap between its capacity and seasonal reserve requirements, up to a calculated ceiling. SPP estimates it will be ready to provide draft generator interconnection agreements by the end of March 2026. Please see the section titled “New Thermal Generation at State Line” below for more information on Liberty’s ERAS generation project.

SPP Transmission Planning

According to SPP, the ITP process promotes transmission investment to meet near- and long-term reliability, economic, public policy, and operational transmission needs. As a member of SPP, Liberty was awarded significant transmission projects within its service territory via the ITP process. These transmission projects are part of the Company’s five-year investment plan. The ITP process coordinates solutions with ongoing compliance, local planning, interregional planning, and tariff service processes. The goal is to develop a 10-year regional transmission plan that provides reliable and economic energy delivery and achieves public policy objectives, while maximizing benefits to the end-use customers. The 2024 ITP is guided by requirements defined in SPP’s Open Access Transmission Tariff (“OATT”) Attachment O, which describes the ITP process, and can be found within the SPP’s ITP Manual and the 2024 ITP scope.

The ITP process is open and transparent, allowing for stakeholder input throughout the assessment. SPP staff coordinated the study results with other entities, including those embedded within the SPP footprint and neighboring first-tier entities. The objectives of the ITP are to:

- Resolve reliability criteria violations;
- Improve access to markets;
- Improve interconnections with SPP neighbors;
- Meet expected load-growth demands;
- Facilitate or respond to expected facility retirements;
- Synergize with the Generator Interconnection (“GI”), Aggregate Transmission Service Studies (“ATSS”), and Delivery Point Assessment (“DPA”) processes;
- Address persistent operational issues;



- Facilitate continuity in the overall transmission expansion plan; and
- Facilitate a cost effective, responsive, and flexible transmission network.

On October 29, 2024, the SPP Board of Directors approved a historic nearly \$7.7 billion plan to expand and upgrade the region’s transmission capacity. SPP’s 2024 ITP was, at the time, the single largest proposed construction portfolio in SPP’s 20-year history as a transmission planning coordinator. The initiative, which took 27 months of study and the evaluation of over 2,100 potential solutions to anticipated system needs, represents a major milestone in serving increasing demand for reliable electricity throughout the region. The ITP sought to provide cost levelization across the SPP footprint, relief of operational congestion, a more reliable and resilient electrical grid, and to facilitate resource adequacy, generation interconnection, and delivery point load additions. The \$7.68 billion investment in the 2024 ITP portfolio is comprised of reliability, winter weather, economic, short circuit and operational projects that will mitigate 1,062 system issues. Reliability projects allow the region to meet compliance requirements and keep the lights on by providing loading relief, voltage support, and system protection. Winter weather projects address voltage and thermal overload violations that SPP observed during winter storm Elliott (December 2022) and a generically modeled winter storm based on aggregation of common stressors from multiple previous storms. Economic projects allow the region to lower energy costs through mitigation of transmission congestion. This includes 89 projects, totaling 495 miles of transmission rebuilds and 2,333 miles of new transmission.

Liberty was selected for two extra-high voltage (“EHV”) projects as well as three high voltage (“HV”) projects. These projects amount to the largest transmission projects in the Liberty footprint in over 40 years. The Delaware–Monett 345kV project will construct 114.5 miles of new transmission lines between Delaware, Oklahoma and Monett, Missouri. The project, which will be split with American Electric Power (“AEP”), is estimated at nearly \$343 million. The Monett–North Branson 345kV project will construct 47.2 miles of new EHV transmission lines between Monett and Branson, Missouri. The project is estimated at nearly \$166 million. The Monett–Aurora, Aurora–Ozark Powersite Dam 161kV, and Ozark S.–Ozark Powersite 161kV conversion projects will rebuild 92.2 miles of existing transmission. The EHV group of projects is estimated at approximately \$337 million (assuming 50/50 split of joint project with AEP) and the HV group of projects is estimated at over \$198 million. While Liberty will be responsible for the upfront costs of the projects, SPP’s cost allocation policy will reimburse the Company over the estimated 40-year life of each project. Projects over 300kV are considered regional and Liberty will be responsible for its load ratio share (at this time just under approximately 3%). In addition, Liberty is responsible for its load ratio share for all other 300kV+ projects within the SPP region. Projects between 100kV and 300kV are considered zonal and cost allocation is 33% regional and 67% zonal. Using 2025 allocators Liberty’s retail customers would pay approximately 94% of all zonal costs.



Safety and Reliability

Customers consistently point to reliability as a top priority, and Liberty is committed to operating and maintaining its grid infrastructure in an affordable, safe, and reliable manner on behalf of the communities it serves. Not all these improvements will be readily visible to customers, nor are they limited to the installation of physical assets or devices, but they will benefit customers, nonetheless.

Grid Resiliency – Distribution

Liberty continually updates our philosophy for design and construction of Liberty’s electric distribution system. Our grid resiliency design philosophy will be applied through a series of projects and through the recurring process of constructing new or replacing old facilities to accomplish a stronger and more resilient infrastructure.

Liberty has evaluated and approved numerous projects to improve the resiliency of its electrical infrastructure. Notable projects include:

- Replace and upgrade distribution circuit breakers.
- Replace and upgrade critical aged assets and equipment prone to failure.
- Build new substations to accommodate redundancy and load growth.
- Install and upgrade animal guards on distribution and substation equipment.
- Increase capacity and resiliency of lines serving remote communities.
- Systematically inspect, treat, and replace old underground cable as needed.
- Upgrades to service center facilities and equipment inventories.
- Install Fault Location Isolation and Restoration (“FLISR”) systems associated with Infrastructure Investment and Jobs Act (“IIJA”) Grant.

These projects, among others, will increase the resiliency of distribution infrastructure to withstand threats from vegetation and extreme weather, increase load-carrying capacity to accommodate evolving customer loads and two-way power flows, and reduce the average age of distribution assets, reducing risk and frequency of failure. These resiliency upgrades not only strengthen infrastructure but also contribute to reduced outage-related costs and long-term maintenance expenses. By investing in durable solutions today, Liberty helps maintain affordable service for customers over decades of operation. As emerging technologies present opportunities to approach existing problems in new ways, Liberty seeks to add them to its planning toolbox.

Grid Resiliency – Transmission

Like Distribution Resiliency, projects and investments on Liberty’s transmission infrastructure will improve system resilience through strategic upgrades and rebuilding of core facilities such as high-voltage transmission lines and associated substations. Strategic transmission investments are designed to optimize reliability while controlling costs. Liberty’s participation in regional planning processes ensures that affordability is preserved



through shared infrastructure benefits and cost allocation mechanisms. Notable projects include:

- Addition and upgrade of 69kV and 161kV breakers.
- Upgrade and expansion of SCADA to Liberty’s substations.
- Replace and upgrade aged transmission structures.
- Replace and upgrade critical transmission lines delivering electricity across Liberty’s service territory.

These projects will increase the resiliency and flexibility of transmission infrastructure to accomplish system redundancy for continued service through equipment failures or other disruptions and implement more robust structures to withstand threats from vegetation and extreme weather.

Grid Resiliency – Notable Accomplishments

Liberty continued its investment into our reliability and inspection programs in 2025. The Company supports the reliability requirements through a distribution system inspection program in all jurisdictions. Liberty replaced or reinforced transmission and distribution poles that were identified through the field inspections. The work included in this project is the replacement of poles, wire, anchors, and other items. This project also includes the reinforcement of structures to extend the useful life of the asset.

Tipton Ford Substation #292 is a critical transmission node on the 161kV system located in Newton County, Missouri. Positioned where four transmission lines converge, Substation #292 is essential in providing reliable power to many Liberty customers. The substation was rebuilt allowing Liberty to apply current day standards, install modernized equipment, and prepare the substation for future load growth. The project was completed in December 2025.

Generation Optimization

The utility space is under pressure to optimize the safety, utilization, and operational efficiency of all their assets and equipment. This is especially true for existing coal and natural gas plants. Liberty is prudently investing to optimize its existing generation facilities with focus on failure risk, reliable and responsive operation, and fuel conversion efficiency. With the recent passage of performance-based accreditation in the SPP and continued focus on weather related reliability standards from the North American Electric Reliability Corporation (“NERC”), investment in the reliable operation of its generation fleet to increase resiliency and stay in compliance with changing standards will be paramount.

These optimization and continuous improvement projects vary in size and scope ensuring plant safety as a top priority, while focusing on customer affordability and operational reliability. These projects involve upgrades that include comprehensive control system replacement, combustion turbine (“CT”) rotor upgrades, insulation enhancement, access platform upgrades, valve upgrades, pump upgrades, drainage improvements, plant



automation augmented with tools that will help standardize operational decisions, LED lighting, labor saving tools, water saving upgrades, and more. With the implementation of these projects, Liberty will be able to offer greater longer-term value to its customers through sustained operations of these plants until they are replaced in a cost-effective manner.

Solar

Liberty's Prosperity Community Solar Farm is located on approximately 15 acres of land near Prosperity, MO, and has a capacity of approximately 2.25 megawatts, consisting of more than 5,500 bifacial photovoltaic panels. Community solar is unique, in that it is sold as a voluntary option to interested customers as dedicated renewable supply to offset their individual consumption. These customers participate through a simple and convenient billing mechanism, so they gain the benefits of solar energy supply without needing to install a dedicated system on their own roof or facility. Current optimization and continuous improvement projects include harmonics monitoring, installation of security cameras and lighting, control room upgrades, efficiency improvements, and a new inverter.

New Thermal Generation at Riverton

The Riverton Units 10 and 11 replacement project is in progress and part of the capital project plan. The Riverton Replacement project is installing two CT generators, Riverton Unit 13 and Riverton Unit 14, each with a nominal net output of roughly 13.3 MW. The turbines are fast-starting and dual fuel capable, providing resiliency for periods of natural gas scarcity. The two new turbines will have no post-combustion pollution controls but will employ dry low NOx combustion to limit NOx formation. The new units will be more efficient than the existing units, meaning they will consume approximately 37% less fuel per kWh generated than the units they will replace. Additionally, the CTs may provide a benefit for the potential of utilizing H2 as a blend fuel in the future. This project has a projected commercial operation date in the third quarter of 2026.

New Thermal Generation at State Line

To support resource adequacy, Liberty plans to use SPP's ERAS process to rapidly evaluate and construct a generating facility featuring a single F-class combustion turbine with an approximate capacity of 250 MW at the Company's State Line Power Station in Joplin, Missouri.

Liberty's 2025 IRP acquisition strategy calls for the addition of approximately 240 MW of frame combustion turbine generation utilizing existing infrastructure in response to evolving SPP resource adequacy requirements and recent market and regulatory changes. Following a comprehensive technology selection study conducted on Liberty's behalf, several generation options were evaluated for technical feasibility, cost, and operational performance. The F-class combustion turbine was selected as the preferred solution



because it offered a low installed capacity cost per kilowatt, best meeting customer and stakeholder priorities for affordability and reliability.

Liberty filed its Certificate of Convenience and Necessity (“CCN”) application on October 24, 2025, in docket EA-2025-0299. If the CCN is approved, Liberty anticipates that construction will begin in late 2028 or early 2029 and that the new unit will be available for service in the third quarter of 2030.

Infrastructure Investment and Jobs Act (“IIJA”) Projects

Federal grant funding significantly reduces the rate impact of these projects, reinforcing Liberty’s commitment to affordability. By leveraging external funding sources, Liberty ensures that customers benefit from advanced technologies without bearing the full cost burden. On October 18, 2023, the U.S. Department of Energy (“DOE”) announced that Liberty was selected to receive up to \$47.5 million in funding support for a project seeking to deploy Distribution Automation (“DA”) autorecloser devices across the Company’s distribution system, while making other technology and equipment capacity and resilience upgrades required to support grid automation. The project, provisionally termed “Project DA” was selected for funding through the Grid Resilience and Innovation Partnerships Program (“GRIP”) from the DOE’s Grid Deployment Office.

The grant funds will allow the Company to install or upgrade approximately 300 DA devices across approximately 160 circuits, while reconductoring and hardening over 30 miles of distribution lines and upgrading capacity at several distribution substations. An associated benefit of this program will be the ability to monitor the status and loading of the distribution system at over 300 new points, improving our ability to detect and respond to system disturbances. The DOE’s support of the project means that Liberty’s customers in Arkansas, Kansas, Missouri, and Oklahoma can benefit from improved service reliability, resilience, and added capacity while minimizing the rate impact that is significantly reduced by way of a DOE funding contribution, provided that relevant regulatory commissions approve the associated investments in future rate filings. Aside from the service-related benefits, the projects are poised to contribute to the local economy by creating direct and indirect jobs and facilitating skills advancement for line personnel.

It is also notable that the DOE awarded another GRIP program grant to Liberty’s California affiliate, Liberty Utilities (CalPeco Electric) LLC, on October 1, 2024. The California project will deploy the latest Advanced Metering Infrastructure (“AMI”) solution in California, which includes a number of advanced field telecommunications and grid edge computing features, that can create important synergies with project DA. Aside from the technological synergies, the two affiliates plan to coordinate their grant management and reporting activities to share best practices and streamline administrative tasks.

Please refer to Exhibit 4 for further discussion of Project DA background, scope, and targeted outcomes and capabilities.



Modernization

Electric consumers are evolving, and Liberty is responding. As preference trends shift, Liberty is updating its fleet, operations, customer programs, and digital infrastructure to meet these shifts in an affordable, safe, and secure manner.

Plant Emissions

Liberty will continue to prudently invest in the maintenance and optimization of its fossil fuel plants to ensure they perform reliably, run optimally, and emit as few pollutants as possible during their remaining operational life.

Projects include upgrades to generation units and their control systems that improve heat rate (net efficiency of conversion from fuel to electricity) and increase net power output capacity. Other projects consist of proactively replacing aged equipment that are at higher risk of failure to ensure reliable operations.

For more details on Liberty’s long-term generation supply plans in Liberty’s Central Region, please refer to Liberty’s 2025 Triennial IRP and Preferred Plan Update which were filed in Case No. EO-2024-0280 on April 1, 2025, and October 16, 2025, respectively.

Transportation Electrification

Liberty has supported transportation electrification through a range of pilot programs launched in 2022 under the Commission-approved Transportation Electrification (“TE”) Pilot (File No. ET-2020-0390). These programs—such as Residential Smart Charge, Ready Charge, School Bus Electrification, Commercial Electrification, Fleet Advisory, and Non-Road Incentives—were designed to expand early EV charging infrastructure, support customer education, and provide incentives during the initial market-development phase.

Liberty is no longer accepting new enrollments and anticipates that the TE Pilot will conclude at the end of its authorized term. As the Pilot winds down, Liberty continues to use the insights gathered to inform future planning, including understanding EV impacts on the distribution system, customer charging behavior, potential demand response opportunities, and the suitability of charging-based metering technologies.

Liberty continues to pursue efficiency efforts through evaluation of hybrid options and the reduction of our fleet by employing a Fleet utilization tool to identify proper levels of vehicle needs. The Company continues to evaluate the use of Hybrid vans where operationally feasible and is revising the Take-Home Vehicle policies to reduce fuel usage.

Cybersecurity and Technology

In coordination with application, system, and integration upgrades associated with the SAP platform and other technologies, Liberty is upgrading parts of its digital infrastructure, cybersecurity, data governance, and analytics. This involves investments in computer, server, and network upgrades to support user access and bandwidth. It also includes investments in safe and secure cloud strategies that facilitate collaboration and increase



data utilization without exposing sensitive information or critical systems. The Cybersecurity Program is a multi-year programmatic uplift of Liberty's cybersecurity readiness to adjust to the changes in the technology landscape and build internal capacity to respond to the growing threats targeting utility operations. The program's objectives and desired outcomes are mapped to the National Institute of Standards and Technology ("NIST") Cybersecurity Framework ("CSF"). This includes continuous on-going assessments to improve the program's outcomes and value. New digital architectures have been established accompanying governance strategies and procedural documentation. Liberty's customers will experience improved and secure utilization of operational and customer data, leading to enhanced operational efficiency for utility personnel. This includes the proactive identification and resolution of issues before they lead to service disruptions, as well as optimized utilization of utility infrastructure.

Corporate IT executed enterprise-wide initiatives that enhanced operational efficiency, cybersecurity, and customer service across the organization. Our key focus areas included Customer Experience, Cybersecurity, Technology Modernization, Operational Technology, Reliability and Resiliency, SAP Optimization and Enhancements, and System Sustainment. Recent efforts included completion of the SAP technology platform rollout, which impacts nearly every aspect of the Company; modernization of network infrastructure; improved system reliability and scalability; and the deployment of advanced endpoint security measures. Additionally, enhanced Cloud network capacity has significantly strengthened resiliency and performance. Best Cybersecurity practices were embedded into project execution, ensuring robust security frameworks for all future initiatives.

Investment Plan Summary and Conclusion

Affordability remains central to Liberty's five-year investment plan. Through careful resource planning, cost management, and utilization of federal funding opportunities, Liberty strives to deliver reliable and modern electric service at a reasonable cost to customers. As compared to the Company's investment plan for 2025 (including new generation), the estimated capital investment for year 2026 is lower by \$8.8 million, or about 3%. Overall, this year's five-year investment plan, including new thermal generation, covering the period 2026-2030, is approximately \$101.7 million higher than last year's plan which covered the period 2025-2029. Comparing the common period of 2026-2029 with new thermal generation, this year's plan is about \$273.1 million or 14% lower than the same period last year. The most noticeable changes between the 2025 and 2026 five-year investment plans are changes to project timelines and the addition of new thermal generation at State Line Power Station, with both projects now being PISA eligible.

As detailed above, Liberty's 2026 investment plan consists of approximately \$2,232.6 million over the next five years, across eight strategic investment areas to modernize the Company's electric infrastructure (see table on page six). It is important to note that a material portion of the planned transmission investments (which comprise approximately one-third of the total capital plan), are expected to be allocated regionally under the SPP



cost-sharing framework and will not be recovered exclusively from Liberty's retail customers.

For the 2026 budget, grid modernization projects, within the meaning of RSMo. 393.1400 and the minimum 25% requirement, constitute approximately 59% of planned capital expenditures. Investments in resiliency represent a major portion of Liberty's Investment Plan, as it is crucial to our communities that our infrastructure continue to perform reliably under a variety of circumstances and extreme weather events. These investments include new generation to enhance reliability and resource adequacy, including replacement of units at the Riverton Generation Station and a new ERAS generation unit at State Line Power Station. Investments are also being made in three SPP ITP projects to modernize transmission and minimize region congestion. Overall, these investments represent Liberty's long-term planning estimates of expected capital investment on the electric infrastructure for Liberty's Central Region. This investment plan addresses all electric infrastructure for the Central Region, including Missouri, Kansas, Arkansas, and Oklahoma.

Bringing about improved customer solutions through cost management and modern technologies will enable Liberty's electric grid to meet evolving customer needs both today and in the future.



2025 Actual Capital Expenditures (Dollars)

Expense Category	2025 Actual Expenditures
COMMERCIAL OPERATIONS	\$127,630,789
GENERAL SERVICES	\$16,270,087
PRODUCTION	\$45,599,588
WIND	\$1,389,300
TOTAL	\$190,889,764

AFUDC is included in actual amounts.

Minor inconsistencies can occur due to rounding.

Most large negative balances reflect transfers occurring within budget lines.

COMMERCIAL OPERATIONS

Funding Project	Project Description	2025 Actual Expenditures
DA0115	Distribution Automation & Improvements IJJA	\$3,650,528
DA0161	Build New 161kV Sub in Gentry	-\$361,461
DA0620	Aging Equipment	\$2,812,857
DA0630	Substation Security	\$920
DA0640	SCADA Installation	-\$74,650
DA0650	Wildlife Guards	\$1,732
DA0660	Underground Conductor	\$8,505
DA0680	Fleet Electric Charging Station	-\$64,226
DISTRIBUTION ADDITIONS		\$5,974,205
DB0001	Extensions	\$33,276,372
DB0004	Street Lighting	\$1,803,730
DB0005	Distribution Transformers	\$2,033,067
DB0006	Customer's Meters	\$3,232,359
DB0007	Customer's Services	\$8,298,781
DB0008	Substation Blankets	\$158,832
DB0010	Misc Dist of OH Lines	\$6,660,076
DB0011	Misc Dist of UG Lines	\$350,652
DB0013	Damage Claim	\$1,046,145
DB0014	Emergent Distribution Equipment	\$170,304
DISTRIBUTION BLANKETS		\$57,030,318
DR0001	Relocate T&D for Hwy Changes	\$686,313
DR0002	Replace Bad Order Distr Poles	\$13,410,747
DR0008	Distr. Reliability Improvement	\$96,056
DR0009	Misc Rebuilds/Add to Dist Subs	\$543,445
DR0010	Misc Rebuilds/Add - Dist Lines	\$333,050



DR0011	Replace UG Dist Cable-System	-\$9,423
DR0012	Joint Use Line Rebuilds	\$75,389
DR0013	Purchase Power Transf & Brkrs	\$4,623,192
DR0186	Replace Struct & 12kV Brkr Wan399	-\$27,083
DR0187	Replace Struct & 12kV Brkr Wanda400	-\$51
DR0188	Replace Struc T&D Heatonville#338	\$3,297
DR0192	Replace Wood Struct Boston #249	-\$110,707
DR0194	Replace Wood Struct Arcola#250	\$5,306
DR0212	REBUILD/INC CAPACITY-BAXTER	-\$171
DR0230	Add Brkr & New Ckt SW City#414	\$4,760
DR0236	Gravette Dist Line Recond	\$309,681
DR0241	Joplin 20th Street Road Widening	\$936,373
DR0242	I/R 12kV Reconductor Ckt 370-2 Madi	\$73,213
DR0243	Sub 447 Increase Switching Capability	\$469,870
DISTRIBUTION REBUILDS		\$21,423,257
DS0130	Service Center Improv/Addition	\$5,526
DS0140	Other Additions/Improvements	-\$317
DX	Excess Facilities	\$1,007,172
COMMERCIAL OPERATIONS FACILITIES		\$1,012,381
DISTRIBUTION TOTALS		\$85,440,161
GT0010	Purchase Misc Tools	\$53,010
GT0015	Purchase Fall Arrest Equipment	\$12,372
GT0075	Purchase Large Tools & Equipment	\$5,371
GT0103	Purchase Test Equipment	\$23,972
GENERAL TOOLS		\$94,725
STORM JOBS	Storm Outages	\$7,864,684
STORM JOBS		\$7,864,684
TA0236	Install ICON 20 Node - 2 Ring	\$60,605
TA0246	Install DFR Asbury Sub 349	-\$2,559
TA0937	Install 2-69kV Breakers at#251	-\$259,137
TA0939	Inst2Way69kV MOAB TransSch 296	\$555
TA0941	Install Monett Switch Automation	\$750
TA0950	Install SCADA at Sub #124	\$3,322
TA0955	Transmission Ops Software Upgrade	\$598,134
TRANSMISSION ADDITIONS		\$401,670
TB0001	Transmission Blankets	\$39,380
TRANSMISSION BLANKETS		\$39,380



TR0001	Replace BO Trans Poles	\$1,175,775
TR0009	Misc Rebuilds/Add - Trans Subs	\$614,701
TR0010	Misc Rebuilds/Add-Trans Line	\$772,518
TR0127	Repl 69kV Infrac Tipton Fd#292	\$15,212,734
TR0601	Sub 404 Hockerville Rep Equip	\$8,420
TR0910	Rebld 69kV Boston - Greenfield	\$6,264
TR0911	69kV Rebuild #249 to #251	\$5,303
TRANSMISSION REBUILDS		\$17,795,715
TM0100	W7th to Stateline 161kV Rebld	\$7,547,101
TM0103	AECC Sibley Road Substation Line Tap	\$771,264
TM0104	SPP ITP-Upgrade Cap/Rebd Monett to Aurora	\$169,339
TM0105	SPP ITP-LINE 29-0 Ozark to Powersite 69kv	\$3,172,513
TM0106	SPP ITP-346/161Kv Sub Branson to Assc tap	\$4,334,237
TRANSMISSION		\$15,994,454
TRANSMISSION TOTAL		\$34,231,219
TOTAL COMMERCIAL OPERATIONS		\$127,630,789

GENERAL SERVICES

Funding Project	Project Description	2025 Actual Expenditures
CS0052	C1 - Empire Customer First SAP	-\$6,481,673
CS0066	GIS/ADMS - EDE	-\$578
CS0071	Corp IT Projects	\$21,236,909
COMPUTER SERVICES		\$14,754,658
GA000	General Projects Not Budgeted	-\$44,400
GA0001	Fleet	\$993,956
GA0010	Joplin Facilities	\$292,037
GENERAL ADDITIONS		\$1,241,593
GF0001	Facilities	\$23,450
GENERAL FACILITIES		\$23,450
STE010	Install/Remove FM 2-way Equipment	\$2,754
STE022	Replace Batteries	\$52,704
STE030	SCADA	\$118,040
TELECOMMUNICATIONS		\$173,498
AMI001	AMI	-\$614,189
GSC071	Corp IT Projects	\$871,667



CSG052	C1 – Customer First - EDG	-\$104,442
000000	Projects Not Budgeted	-\$76,148
GENERAL SERVICES		\$76,888
TOTAL GENERAL SERVICES		\$16,270,087

PRODUCTION

Funding Project	Project Description	2025 Actual Expenditures
NG0026	Riverton Replacement	\$23,463,116
NEW GENERATION		\$23,463,116

EN0013	Buffalo Quarry Conserv Bank De	\$2,205
GI0001	Generation Interconnects	-\$1,748,713
GI0002	System Capacity Upgrade Dadeville Sub	-\$3,029,285
ENVIRONMENTAL AND SAFETY		-\$4,775,793

Individual PCC projects include the WGI credit

PCC001	Misc Prod Plant Additions	-\$28
PCC002	Labor Saving Devices & Tools	\$2,612
PCC004	HRS&G & Aux Equip Additions	\$394,668
PCC006	Turbine Upgrades	\$1,659,080
PCC009	Deep Well Pump & Column	\$51,594
PCC011	Plant Replacements & Improvement	\$170,511
PCC012	Turbine Gen Aux Equipment Additions	\$30,583
PCC015	Fire Protection	\$17,680
PCC016-01	Water Analysis Intake Structure	\$445,134
PCC019	Control System Upgrade	\$3,919
PCC020	Incidental Replacements/Improv	\$238,499
STATE LINE COMBINED CYCLE		\$3,014,252

PE0001	Misc Production Plant Addition	\$39,656
PE0002	Labor Savings Devices & Tools	\$10
PE0009	Eng Ctr Controls	\$19,290
PE0010	Eng Ctr BOP	\$512,983
PE0011	Eng Ctr Unit 1	\$268,190
PE0012	Eng Ctr Unit 2	-\$1,309,530
PE0013	Eng Ctr Unit 3	\$172,821
PE0014	Eng Ctr Unit 4	\$103,634
PE0025	Gas Generators	\$3,135,732
ENERGY CENTER		\$2,942,786



PI0001	Iatan Plant	\$3,651,395
IATAN PLANT		\$3,651,395
PII001	Iatan 2	\$611,717
IATAN 2 PLANT		\$611,717
PIC001	Iatan Common Facilities	\$1,060,866
IATAN COMMON FACILITIES		\$1,060,866
PP0001	Plum Point Misc Prod Plt Add	\$474,497
PLUM POINT PLANT		\$474,497
PO0001	Hydro Plant Additions	\$74,658
PO0002	Labor Saving Devices & Tools	\$23,055
PO0012	Improvement to Powerhouse	\$153,884
OZARK BEACH		\$251,597
PR0001	Production Plant Additions	\$17,795
PR0002	Labor Saving Devices & Tools	\$6,337
PR0003	Plant Replacements & Imprvmts	\$112,611
PR0006	Boiler & Aux Equip Additions	\$693,236
PR0007	Turbine Gen & Aux Equip Add	\$13,712,484
PR0009	Lowell & Bypass Replacements	\$77,098
PR0011	Valve Additions	-\$970
PR0014	Insulation Improvements	\$25,287
PR0019	Control System	-\$1,587
PR0020	Feedwater Heaters	\$82,639
PR0021	Water System Additions	\$55,120
PR0024	Combustion Turbines	\$69,622
RIVERTON		\$14,849,672
PS0001	Misc Production Plant Addition	\$13,256
STATE LINE		\$13,256
PW0001	Labor Saving Devices & Tools	-\$261
PW0002	Plant Replacements/Improvement	\$29,080
PW0003	Facilities Maintenance	\$8,935
PW0004	Land Management Equipment	\$296
PW0008	Wind Farm Specialty Tools	\$4,177
WIND		\$42,227
TOTAL PRODUCTION		\$45,599,588



Wind

Funding Project	Project Description	2025 Actual Expenditures
WNF003	Turbine Blade Impr/Repl – NFR 118	\$892,655
WNF005	SMWA to CapEx Conversion	\$178,127
WNF008	Access Platform (Safety) for MPT	\$41,327
WNF012	Access Road/ low water crossing impr	\$1,965
WNF013	Turbine Blade - Leading Edge Rest/Impr	\$21,250
TOTAL NORTH FORK WIND		\$1,135,324
NR0001	North Ridge Wind Projects	\$18,376
WNR004	Turbine Blade Impr/Repl – NR 116	-\$90,527
WNR006	SMWA to CapEx Conversion	\$109,547
TOTAL NEOSHO RIDGE WIND		\$37,396
WKP002	Oil Storage Shed – KP – 117	\$54,238
WKP008	Ignition Software	\$139,500
WKP009	KP MPT Bushing Upgrade	\$22,842
TOTAL KINGS POINT WIND		\$216,580
TOTAL WIND		\$1,389,300

2025 Actual Spending Grand Total

GRAND TOTAL (including AROs)	\$190,889,764
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\$20 million projects – 2025

Projects included in this report went into service in 2025 and were \$20 million or more.¹

Tipton Ford Substation

Substation #292 (Tipton Ford), located in Newton County, Missouri, serves as a critical transmission hub within Liberty's 161kV network. As the convergence point for four transmission lines, the station supports (4) 161kV circuits, (1) distribution circuit, and (2) 69kV circuits, making it essential for delivering reliable power to a significant portion of Liberty's customer base. Prior to the project, the substation's aging infrastructure and bus arrangement created operational risks, including the potential for a single bus outage to interrupt all four transmission lines simultaneously. To address these concerns, the project installed a modern 161kV ring bus to strengthen reliability and mitigate the risk of widespread outages. The substation was rebuilt using a cost-effective line-in/line-out single bus configuration, which allowed Liberty to replace end-of-life equipment while maintaining uninterrupted service to customers throughout construction. This investment ensured the application of current engineering standards, the installation of modernized protective and control equipment, and preparedness for future load growth.

Start Date: July 1, 2022

Cost to Date: \$28,246,510

In Service Date: December 15, 2025

¹ This report does not include blanket projects or budget lines.



\$20 million projects – 2026

Projects included in this report are scheduled to begin construction in 2026 and are expected to meet or exceed a total project cost of \$20 million.¹

Project Distribution Automation

Project Distribution Automation (“DA”) is a grid modernization initiative supported through the Infrastructure Investment and Jobs Act (“IIJA”) Grid Resilience and Innovation Partnerships Program (“GRIP”) from the Department of Energy’s (“DOE”) Grid Deployment Office, which provides federal cost sharing for eligible Smart Grid and resilience investments that meet program objectives and succeed in a rigorous competitive review. Project DA was one of seven Liberty concept papers submitted in late 2022; five were encouraged to advance, and Liberty proceeded with three full applications—two at Liberty-Empire (including DA). DOE announced DA as selected for funding in October 2023. The project was supported by technical studies, including a cost-benefit assessment used for the IIJA application and selection, and the anticipated cost sharing enhances customer benefits by reducing the portion of eligible costs borne by ratepayers.

Technically, Project DA will add approximately 261 new autoreclosers and further integrate 49 existing devices across Liberty’s distribution system, affecting roughly 179 distribution circuits in the four states Liberty serves. The project adds a complementary dimension to Liberty’s reliability efforts by segmenting circuits and equipping electrically adjacent circuit interfaces with automated switching devices to speed outage isolation and restoration, including “throw-over” capability during contingency events. To safely support added pole-top equipment and enable the intended automation functions, Liberty will complete prerequisite distribution renewal and capacity work, including strengthening line segments at device locations to appropriate weight-bearing and safety standards (“e.g., poles, crossarms, and conductor”), targeted reconductoring on approximately 34 miles, and enabling capacity upgrades at three upstream substations most critical for contingency transfer capability. The project will also deploy a Field Area Network (“FAN”) telecommunications backbone integrated with the company’s Outage Management System (“OMS”), advancing digital field operations and enabling incremental data-driven insights to improve future planning and operational decision-making.

Project Initially Awarded by DOE: 2023
Start Construction: 2026
Expected Net Cost: \$ 72,570,956
Expected Completion Date: 2029

¹ This report does not include blanket projects or budget lines.





2026 PISA Report Exhibit 4

Cost-Benefit Analyses and Performance Metrics
for Planned Capital Investments of Greater than \$1 Million

The Empire District Electric Company
d/b/a Liberty

February 27, 2026

Introduction and Background

Pursuant to the Stipulation and Agreement in Commission File No. ER-2021-0312, and following its inaugural submission in the Company's 2025 PISA Annual Report, Liberty is pleased to present the second iteration of its framework for cost-benefit analysis and performance metrics for planned capital investments of \$1 million and above (collectively referred to as CBAM framework). The following information pertains only to the planned 2026 investments that meet the \$1 million threshold and reflects the discussions that took place between the Company and representatives of the Missouri Public Service Commission Staff ("Staff") and the Missouri Office of the Public Counsel ("OPC"). While this infrastructure is predominantly located in Missouri, serving Missouri residents, the Central Region also operates electric infrastructure and serves retail electric customers in Kansas, Arkansas, and Oklahoma.

The CBAM framework is a stepping-stone in a larger journey of continuous improvement and experimentation with respect to Liberty's Asset Management practices. Consistent with last year's PISA filing, this iteration of CBAM contains for the first time quantitative values for many of the performance metrics proposed in the 2025 filing.

While a considerable amount of work lies ahead, Liberty is excited to take this next formal step on its continuous improvement journey that was in part sparked by the settlement discussions in Case No. ER-2021-0312. The Company is confident that with continued support of its regulatory stakeholders, it can make important strides along the asset management maturity curve in the coming years, moving its planning and analytics functions towards the industry's best practices.

Manner of Presentation: CBAM Investment Program Nomenclature and Hierarchy

As described in the 2025 PISA filing, to balance clarity and efficiency of presentation of CBA and metrics results for investments exceeding \$1 million, Liberty developed its own investment categorization approach to balance the high-level PISA investment categories used in the body of this report (e.g. Transmission or Distribution Resilience) against the most granular "Funding Project" entries used to report the prior year's actuals in Exhibit 1. The categorization framework groups planned investments across the Company's lines of business into three main *Portfolios*, which are, in turn comprised of individual *Programs*. Starting at the top of this investment planning hierarchy, the three Portfolios are:

System Access (Transmission and Distribution) - networks investments made to connect new customers, modify, or relocate facilities on request of existing customers or government entities, Regional Transmission Organizations ("RTOs"), or other parties.

System Renewal (Transmission and Distribution) – investments made to replace, refurbish, or reinforce existing assets with the aim of managing the system's lifecycle, reducing probability or impact of outages, or enhancing the assets' ability to withstand increased mechanical, thermal or other forms of stress they are subjected to under the normal course of operation or in extreme circumstances.



System Service (Transmission and Distribution) – investments seeking to add new technical capabilities to increase the systems’ operational efficiency, enhance transformation capacity or inter-area transfer capability and flexibility, expand reliance on data-driven planning and operational decisions, or augment the operational tools and processes in anticipation of emerging new ways of utilizing the grid.

Each Portfolio is in turn comprised of individual Programs, which are presented here through Program Summary documents. Program Summaries describe Liberty’s current approach to investment planning, asset management, and proposed performance measurement in a particular area of the business and provide a combination of qualitative and quantitative information that explains the underlying planning decisions and conveys the relevant cost-benefit assessment variables for the group of assets in question

Most programs are intended to be evergreen. Some programs, however, can be more temporary in duration and exist until their targeted objectives are met, or circumstances change otherwise. Table 1 showcases the planned 2026 programs with investments above the \$1 million threshold, grouped by business line and portfolio.

Table 1: Planned 2026 Capital Programs Exceeding \$1M Cost Forecast

Portfolios	Transmission	Distribution
System Access	T1. Southwest Power Pool (SPP) Integrated Transmission Planning (ITP)	D1. Customer Connections D2. Externally Initiated Work
System Renewal	T2. Proactive and Reliability-Driven System Renewal T3. Reactive / Inspection-Driven System Renewal	D3. Proactive and Reliability-Driven System Renewal D4. Reactive / Inspection-Driven System Renewal D5. Emergency System Repairs
System Service		D6. Grid Flexibility Enhancements: Project DA D7. Risk-Based Planning and Connectivity Model Enhancements: Field Data Collection



Program Summaries Content

The CBAM framework is built around program-level discussion of planning and asset management *processes* (and their ongoing evolution) which the Company uses to identify, evaluate, and prioritize regularly recurring investments that make up a material portion of its capital work program year after year. Specifically, Program Summaries describe the current health and performance status quo of the assets in focus (as relevant case-by-case) and lay out the calculation mechanics and quantitative and/or qualitative inputs of the economic or engineering analysis that informs project plans and budgets. Where relevant or available, the Program Summaries outline specific performance metrics applicable to the investment types in question. Program Summaries precede the presentation of individual entries summarizing the 2026 investments related to a given program that meet the \$1 million threshold. These investment summaries include the results of the project-specific quantitative CBA calculations (where these are performed), proposed performance metrics and/or other relevant information for each investment.

In this way, by concentrating the general methodological discussion for each major type of investments in the Program Summary documents and then relaying the key results of these methodologies in brief for individual investment summaries, Liberty is able to fulfill its CBAM-related settlement commitments in a transparent and efficient manner.

Methodology Differences Across Program Summaries and Portfolios

Each of the three CBAM program portfolios have distinct drivers and objectives – from accommodating new customers, to renewing or reinforcing the existing asset base, expanding system capacity, or introducing net new capabilities to current operations. In exploring these different types of investments, Liberty relies on multiple types of inputs and analytical approaches that transform available data into investment decisions. With different types of inputs and different investment outcomes sought, the Company's cost-benefit analyses and performance measurement approaches will naturally differ as well across different programs and portfolios. In addition, although Liberty has made major strides in increasing its reliance on objective data in its planning work in some areas, more work remains to be completed to collect technical data from multiple types of asset classes.

Along with data availability, which is different across portfolios and programs, is the Company's degree of discretion as to whether, when, or in which matter, to execute certain investment activities. For example, while System Access projects to connect new customers or meet other mandatory compliance obligations entail next to no discretion, potential work in the System Service portfolio would imply a greater degree of choice – be it regarding the size, construction timing, or the overall decision to pursue one type of a project relative to another. Similarly, the Company has considerably less discretion in repairing the T&D assets after storm damage to restore service, than it does in relation to the scope, timing or location of projects seeking to proactively replace critical T&D equipment to enhance reliability.



As the degree of the Company's discretion differs across program and portfolios, so does the requisite amount of cost-benefit analysis and performance measurement work that it performs to explore the value of contemplated investments. Importantly, just because cost-benefit considerations may have no bearing on the Company's requirement to make mandatory investments, it does not mean that they are exempt from any type of supporting analytical work. Cost-benefit calculations aside – there are still opportunities to apply quantitative or qualitative analysis to optimize planning certainty, enhance execution efficiency or maintain quality. Accordingly, in the case of programs where a quantitative CBA may not be required, Liberty placed more emphasis on the available Performance Metrics.

Introduction of Risk-Based Planning for Networks Investments

Although much of the Program Summaries' content draws on existing and well-established planning practices, Liberty is also proud to share early results of its planning process innovation. Specifically, the Program and Investment Summaries for Distribution System Renewal and System Service investments feature results of the Company's ongoing adoption of principles of risk-based planning. As noted above, these early attempts will undergo further refinement and recalibration in the coming years, as additional data inputs become available.

Risk-based asset management in the utility space is about selecting an optimal portfolio of system investments based on a systematic assessment of available data that estimates the probability and dollar impact of various undesirable outcomes associated with the functions performed by the utility's asset base (e.g., equipment failures, substation capacity shortages) and evaluates the potential means of mitigating these outcomes through a range of available asset intervention options. Depending on the equipment in question, these options can include asset replacement (with or without capacity expansion or addition of new features and capabilities), incremental equipment maintenance or refurbishment, feeder looping, or a deferral of a given project relative to other opportunities to deploy the utility's capital resources. In conducting this analysis, planners refer to the following types of data (among others):

Information Pertaining to the Probability of Undesirable Outcomes:

- Equipment demographics (age, models, configurations, equipment ratings);
- Equipment condition (results of inspections or intrusive / empirical asset testing);
- Equipment utilization history (e.g., % of time a transformer is loaded at or above capacity);
- Historical performance information (past equipment failure rates, historical pace of load growth); and
- Statistical functions that draw from both industry research and the above utility-specific data to estimate asset-specific failure probability scores.



Information Pertaining to the Economic Impact of Undesirable Outcomes:

- Data on the number and mix of customer classes served by different assets on the system;
- System connectivity models specifying relationships between customers and specific assets and protection devices on the system;
- Results of empirical / actuarial work to estimate the impact of various events:
 - Results of VOLL studies for different customer classes
 - Actuarial estimates of economic costs of safety incidents
 - Actuarial estimates of economic costs of environmental damage (e.g., oil spills).

Information on the Cost of Rectifying Potential Risks:

- Construction cost estimates for various types of work.

By integrating the relevant pieces of the above information, planners can calculate the dollar value that estimates the current risk that the status quo of each asset in the system represents (e.g., its age, condition, the remaining connection capacity, etc.). By analyzing the risk scores (which are expressed as dollar values) against the estimated investment costs that would rectify these risks, planners can derive numerical Benefit-to-Cost Ratios (BCR) for different contemplated investments. In general – the higher the ratio’s output – the more beneficial it is to do the project without delay. However, in systems comprised of hundreds of thousands of individual assets, there is no single BCR threshold below which an investment is automatically not worth pursuing. Instead, to explore the value of a specific contemplated investment, it is critical to compare a given investment’s score relative to those of functionally similar contemplated investments, or the average of all potential investments across the system. This is particularly important in the early stages of introducing risk-based planning metrics when data inputs are incomplete, or analytical methodologies are yet to be calibrated for use in a particular system.

Liberty also notes that since it has only been exploring risk-based asset planning and management for less than three years, many of the investments that underwent this analysis are largely still selected using the Company’s historical practices. This represents an added level of assurance that the specific investments advanced for execution in 2026 are those that the Company’s experts believe need to be made. The relevant Program Summaries include more details as to the specific calculation steps applied to assets and investments in question.

As the Company gains experience with risk-based planning, it intends to expand the use of this methodology to other programs and portfolios, beginning with greater utilization in the transmission business. However, it is critical to re-iterate that the Company sees these new tools as supplementing, but by no means replacing or superseding professional engineering judgment. By identifying the most worthwhile investment candidates through a partially automated triage-like process, the risk-based planning tools will in fact enable



the planning engineers to spend more time on the most value-adding types of analysis and detailed estimation work.

In the comparatively short time that it spent exploring and implementing the risk-based planning framework, Liberty has come to appreciate the new insights and questions that this approach is bringing to the table in everyday discussion between planners, engineers, finance, and regulatory professionals. In submitting the current results of this analysis to the audience of this report, Liberty trusts that its regulatory stakeholder partners will also see the value in the progress made to date and the continuous improvement potential that lies ahead.

Investment Programs Exceeding \$1 Million: Investment Portfolio and Program Summaries.

PART I: System Access Portfolio Summary

The Transmission System Access portfolio is comprised of investments that are deemed needed by the RTO (SPP). These investments, their basis for action, the cost estimates and economic value are all detailed in the latest ITP Assessment Report¹.

The Distribution System Access portfolio includes investments Liberty makes to connect new customers and fashion their facilities with appropriate metering, modify the configuration or capacity of connection facilities for existing customers when asked, or relocate distribution facilities on request of customers, government entities, Regional Transmission Organizations (RTOs), or other third parties.

Program T1: SPP Integrated Transmission Planning

1. Basis for Action

SPP has formulated the following transmission system projects to address needs driven by extreme winter weather.

2. Cost-Benefit Analysis Considerations

In determining the optimal portfolio composition to achieve the desired outcomes, SPP has performed cost-benefit analysis on all projects as part of its 2024 assessment report.

3. Budgeting Considerations

All of the projects within this program are multi-year projects and part of SPP's Winter Weather Project Grouping which has an estimated total cost of \$2.2B. While Liberty's portion of the grouping amounts to over \$364M in total, the 2026 component of the projects in aggregate is only slightly over \$58M.

4. Performance Metrics

Liberty does not propose to measure or track any performance metrics for this program as the nature and quantity of work is entirely determined by the SPP.

¹ <https://www.spp.org/media/2229/2024-itp-assessment-report-v10.pdf>



5. Individual Projects Exceeding \$1M

Name & Synopsis: <i>Joplin West 7th to Stateline 161kV Rebuild</i>	Projected 2026 Investment: \$2.8M
Basis for Action: SPP mandated work to ensure reliability and resiliency during extreme winter weather	
Cost-Benefit Analysis: Already performed by SPP in the ITP	

Name & Synopsis: <i>Upgrade Capacity / Rebuild Monett to Aurora to Powersite 161kV</i>	Projected 2026 Investment: \$0.9M
Basis for Action: SPP mandated work to ensure reliability and resiliency during extreme winter weather	
Cost-Benefit Analysis: Already performed by SPP in the ITP	

Name & Synopsis: <i>Line 39-0 Ozark S. to Powersite 69kv to 161kV Voltage Conversion</i>	Projected 2026 Investment: \$34.6M
Basis for Action: SPP mandated work to ensure reliability and resiliency during extreme winter weather	
Cost-Benefit Analysis: Already performed by SPP in the ITP	

Name & Synopsis: <i>New 345/161kV Substation Branson NW and Assc. Line Taps</i>	Projected 2026 Investment: \$19.8M
Basis for Action: SPP mandated work to ensure reliability and resiliency during extreme winter weather	
Cost-Benefit Analysis: Already performed by SPP in the ITP	

Program D1: Customer Connections

1. Basis for Action

Prospective customers' requests for interconnection to the Company's distribution system, or existing customers' requests for modification of existing connection facilities – such as an upgrade of facilities ratings to increase their load carrying capacity, upgrades to metering equipment, or conversion from overhead to underground services.

2. Cost-Benefit Analysis Considerations

Liberty is required to accommodate new customer extensions or modification to the existing facilities, provided they meet the requirements of its Connection Policy. To ensure



that contemplated connections provide the value to the existing system and customers, the Company estimates the cost of connection work and then performs an economic evaluation to determine the present value of revenues it would expect to collect from the requesting customer over their expected length of connection and assumed annual consumption. The connection horizons and consumption / demand assumptions vary depending on the customer’s rate class and the specifics of individual projects.

3. Budgeting Considerations

Annual work volumes and budgets for the Connections program are challenging to estimate, given that a large number of connection requests are submitted and processed within a single calendar year, while volumes year-to-year can be impacted by a variety of economic factors, ranging from hyper-local to global. As a pragmatic solution to this challenge, Liberty relies on year-to-year trending of connection work volumes to develop an estimated Program budget. The Company reviews its current year Connections program budget regularly and makes necessary reallocation from / to programs where it has a greater spending discretion should the originally budgeted amounts be tracking above or below the expected volumes based on most recent in-year information. Beyond the trending work, and as described in s. 2.4.1, the Company has begun using the risk-based planning approaches to validate the value proposition of the budgeted amounts, where permissible by data.

4. Performance Metrics

As Liberty proposed in 2025, these metrics are reported on a lagging basis, with 2026 being the first year that the data is reported in the PISA Update. These metrics are new for the Company and are being advanced as means of furthering its own understanding of asset management analysis and the ensuing work delivery. The Company welcomes stakeholders’ feedback on these metrics following their review of this document.

Customer Extensions \$ Actual Net Expenditures vs. Forecast: 3-Year Rolling Average	+27.8 %
Tested Meters Annual Passing Rate	99.7 %
Prior Year Customer Contributions as % of Total Expenditures	2.3 %

5. Individual Projects Exceeding \$1M

Name & Synopsis: <i>Customer Extensions</i> – blanket project, a trended amount budgeted for multiple projects, aside from known individual investments in excess of \$1M.	Projected 2026 Investment: \$29.2M
Basis for Action: ensure sufficient capital resources are budgeted to account for a typical annual volume of customer-initiated work based on the year-over-year trending analysis and known data on confirmed pipeline.	



Cost-Benefit Analysis: CIAC contributions will be calculated on a project-by-project basis, with amounts in excess of the Present Value (PV) of forecasted revenues over the relevant connection period assessed to customers requesting connections or modifications.

<p>Name & Synopsis: <i>Distribution Line Transformers</i> – blanket project for pole-mounted and pad-mounted units for reactive replacement in the event of failure, or installation as a part of new or modified customer-requested connections.</p>	<p>Projected 2026 Investment: \$2.3M</p>
<p>Basis for Action: plan for sufficient volumes of equipment to ensure timely and efficient in-year rectification of in-service failures and completion of customer connection requests.</p> <p>Cost-Benefit Analysis: (1) For connection accommodation: CIAC contributions are calculated on a project-by-project basis for connection facilities (service conductor/cable, pole, transformer as required), with amounts in excess of the Present Value (PV) of forecasted revenues over the relevant connection period requested from customers as deposits. (2) For emergency replacement post-failures: volumes predicted using trending, and system risk mitigation value assessed via calculation of B/C ratios of a random sample of top age decile transformers commensurate to the annual dollar budget, and then compared to the average B/C ratio of the entire distribution transformer asset class.</p>	

<p>Name & Synopsis: <i>Customer’s Meters</i> – blanket project for addition of new or replacement of existing customer meters.</p>	<p>Projected 2026 Investment: \$2.9M</p>
<p>Basis for Action: plan for sufficient volumes of equipment to ensure timely and efficient in-year rectification of in-service failures and completion of customer connection requests.</p> <p>Cost-Benefit Analysis: (1) For connection accommodation: CIAC contributions are calculated on a project-by-project basis for connection facilities (service conductor/cable, pole, transformer as required), with amounts in excess of the Present Value (PV) of forecasted revenues over the relevant connection period requested from customers as deposits. (2) For emergency replacement post-failures: volumes predicted using trending, and system risk mitigation value assessed via calculation of B/C ratios of a random sample of top age decile transformers commensurate to the annual dollar budget, and then compared to the average B/C ratio of the entire distribution transformer asset class.</p>	



Name & Synopsis: <i>Customer's Services</i> – blanket project for installation of new customer's overhead/underground service or replacement of any existing customer's service	Projected 2026 Investment: \$7.8M
<p>Basis for Action: plan for sufficient volumes of equipment to ensure timely and efficient in-year rectification of in-service failures and completion of customer connection requests.</p> <p>Cost-Benefit Analysis: (1) For connection accommodation: CIAC contributions are calculated on a project-by-project basis for connection facilities (service conductor/cable, pole, transformer as required), with amounts in excess of the Present Value (PV) of forecasted revenues over the relevant connection period requested from customers as deposits. (2) For emergency replacement post-failures: volumes predicted using trending, and system risk mitigation value assessed via calculation of B/C ratios of a random sample of top age decile transformers commensurate to the annual dollar budget, and then compared to the average B/C ratio of the entire distribution transformer asset class.</p>	

Program D2: Externally Initiated Work

1. Basis for Action

Accommodate known and anticipated requests to relocate, or otherwise modify Liberty's existing distribution facilities submitted by other utilities, government agencies of various levels, RTOs, or private sector entities.

2. Cost-Benefit Analysis Considerations

When processing third-party requests for facilities relocation or modification, Liberty assesses whether the existing age, condition, or configuration of assets being disturbed allows for them be reinstalled in the new location, reused elsewhere on the system, or if it is more efficient to replace and/or upgrade them earlier than would have occurred otherwise given the scale and scope economies of the work involved in accommodating the external request. More specifically, the Company's Electric Distribution Policy mandates that Liberty must determine whether, or to what extent the requested work is in the Company's best interest from the economic, safety, or reliability perspective. This is done by way of calculating the cost of facilities, relocation, removal and/or upgrades, while also factoring in the remaining lifecycle value of the existing assets being affected, and the applicable indirect costs.

Should any portion of the contemplated work not be deemed in the Company's best interests (e.g., when assets with significant remaining lifecycle are subject to relocation), the associated amount is charged in full to the requesting party. In this way, even though the third-party initiated investments are considered non-discretionary as a category, the



projects only proceed to execution once the Company and the requesting party obtain alignment regarding cost responsibility.

In performing this type of lifecycle management analysis today, the Company relies on available asset data and engineering judgment to determine the value tradeoffs described above. As Liberty expands its use of risk-based asset management methodologies and collects more asset condition and in-service failure data, it expects to further enhance its assessment processes in this area in future years. In preparation for this work, the Company completed a trial cost-benefit evaluation of contemplated asset replacements or upgrades in scope of the planned 2026 externally requested projects over \$1 million, using the methodology discussed in the following section.

3. Budgeting Considerations

In addition to larger projects where budgets are developed over a longer period of time, in collaboration with requesting parties, the Company also typically processes a number of smaller asset relocation or modification requests that are submitted and accommodated within a single year. To ensure sufficient budgetary room for these projects, the Company relies on historical trending when estimating the overall budget, in excess of known projects.

4. Performance Metrics

Proposed metrics to be developed in a future year as there are currently no projects of this nature over \$1M in 2026.

5. Individual Investments Exceeding \$1M

No projects in 2026.

PART II: System Renewal Portfolio Summary

Both Transmission and Distribution System Renewal portfolios include investments Liberty has deemed necessary to reduce or maintain the system's risk of power outages to customers. This includes the replacement of line and substation assets that either fail in service, are designated for near-term replacement based on inspection or testing results, or are proactively replaced to improve reliability, enable capacity upgrades, and/or account for certain assets' lengthy procurement and replacement time.

Programs T2 and D3: Proactive Reliability-Driven Renewal

1. Basis for Action

(a) recommendations from planning and engineering personnel on opportunities for proactive reliability improvements and/or resilience reinforcements achievable primarily through replacement (with or without upgrades or enhancements) of existing equipment approaching end of useful life; and (b) recommendations from engineers and supply chain professionals for critical spares volumes based on assessment of current supply chain lead times for major distribution equipment relative to anticipated system renewal or expansion volumes.



2. Cost-Benefit Analysis Considerations

When contemplating new reliability-enhancing initiatives driven primarily by asset renewal, the starting point for planners is the analysis of reliability records from the system-wide level – down to areas served by each substation, or individual feeders and laterals. Outage data is examined across both individual instances of Customer Interruptions (CI) and the Customer minutes of Interruption (CMI) associated with each event. Data is also examined across outage cause codes assigned in the process of outage investigations. The following table provides a five -year summary of outages associated with top 10 outage cause codes, less the data associated with Major Events.

Rank	Count	5-Year Event Count Total	5-Year Event Count Average	Average CI / Event	Average CMI / Event
1	Squirrel Interference	4190	838	28	1835
2	Equipment Decay	2768	554	65	8299
3	Unknown	2139	428	39	3221
4	Lightning	1771	354	48	5273
5	Wind	1383	277	54	8677
6	Bird Interference	1088	218	36	2822
7	Vegetation Fall In	718	144	67	10164
8	Vegetation Grow In	677	135	25	3895
9	Equipment Other	659	132	42	4701
10	Human Activity	645	129	56	4962

Once the reliability analysis yields preliminary focus areas, planners examine the demographics and condition of candidate assets to explore which potential projects carry the greatest reliability-enhancing benefits relative to the estimated construction costs. In the past, this work involved a range of project-specific calculation approaches depending on the available data. With the introduction of the ENGIN / Cost-benefit Analysis Automation Tool (CBAT) risk-based asset management tool, the Company has taken a decisive step towards systematizing the underlying asset analytics work, to drive objectivity and processing consistency, while ensuring that automation of previously manual tasks creates more time for the most value-adding engineering analysis.

2.1. Quantitative Cost-Benefit Analysis Methodology

Although the proactive reliability-driven 2026 investments over \$1 million were scoped before it implemented the ENGIN / CBAT risk-based planning solution, Liberty used the



new tool on these projects to explore its functionalities and stress-test the assumptions underlying it. In doing so, the Company relied on the following methodology:

Step 1: (a) Where specific assets slated for renewal are known (i.e., work other than spares procurement), obtain the assets' available age and condition information, and estimate their failure probability based on the failure curve analysis for the associated asset classes. (b) For spares procurement investments where the specific destination of equipment is not known, identify the similarly rated units with the highest failure probability that are *not* currently scoped into any specific projects (as a proxy for future project).

Step 2: Using available Ice Calculator 1.0 CIC values and the system connectivity model, explore investment criticality and identify the value of lost load downstream of the assets in scope to estimate the outage cost avoidance value, which will form the economic benefit stream in the CBA calculation, along with assumptions of environmental and safety cost mitigation of low-probability catastrophic failure mode events.

Step 3: Using all of the above variables (assets' failure probability estimate, CICs downstream of the assets, and project cost estimates), derive the following metrics:

- Benefit to Cost (B/C) Ratio of planned asset replacement based on the PV of 10-year asset failure risk reduction.
- Total Cost of Operation (TCO) reduction, which estimates the value of performing the work now vs. deferring it to a future point in time over a 10-year evaluation period (during which the assets would be subjected to an increasing failure probability and an emergency renewal cost premium – should failure occur, net of the incremental value derived from keeping the asset in service).

Given that there is typically a greater degree of discretion with respect to proceeding with these projects, the TCO cost reduction is expected to become a particularly valuable metric when considering whether a given project should proceed to construction sooner rather than later.

Once the CBAT tool is used to identify candidate projects, a further Step 4 will be taken to compare the results of Step 3 with similar metrics generated for other candidate projects under consideration, thus enabling quantitative prioritization. Once a shortlist of candidate projects is selected, planners can conduct further in-depth analysis on a smaller subset of projects by factoring in other cost and benefit considerations like opportunities for capacity or resilience upgrades, or those that are more challenging to quantify, or do not apply to the same degree to all projects.

3. Budgeting Considerations

Projects contained in this program are typically reliability-enhancing renewal work which can involve a degree of discretion in terms of its scope or execution timing. For example,



line equipment renewal projects are comparatively suitable for year-to-year deferral or partial scope reduction – particularly when their scopes include work on multiple locations or feeders. On the other hand, planned substation equipment renewal has much lower flexibility in terms of scope boundaries or scheduling firmness, given the installation logistics and the imperative of replacing the legacy units before they fail in service. Critical spares procurement investments fall somewhere in the middle, as the degree of flexibility may be dictated by the number of spares already available and/or commercial terms that the Company can secure with its vendor.

While there are notable exceptions to the above assertions (such as when line reconductoring work is requested by an RTO, or when substation renewal budgets are trended to maintain in-year flexibility for multiple potential projects), the Proactive Reliability-Driven Renewal program provides Liberty with budgetary maneuverability. This maneuverability can become pivotal in years when the distribution system experiences greater-than-anticipated storm activity, or when large investments in other parts of the business necessitate adjustments to the overall distribution capital work program.

4. Performance Metrics

The following metrics were previously proposed based on available data, however there are currently no internal targets associated with these measures. By observing these metrics over the coming years, the Company expects to derive incremental work planning and budgeting insights on which it will report in future years.

Customer Interruptions (CI) Caused by Equipment Failures or Malfunctions	240,936
Customer Interruption Minutes (CMI) Caused by Equipment Failures or Malfunctions	30,384,110

5. Individual Investments Exceeding \$1M

5.1. Transmission

Name & Synopsis: <i>Replace 69kV Aged Infrastructure at Substation #292</i>	Projected 2026 Investment: \$2.3M
<p>Basis for Action: This project covers the complete rebuild of Liberty’s Tipton Ford substation. This is a tier 3 substation and is a critical node in the transmission system where four 161kV lines converge.</p> <p>Cost-Benefit Analysis: In addition to project value considerations not readily quantifiable (e.g., using the opportunity of replacing aged assets to also modify the bus structure into a more reliable ring bus configuration), the following are results of the CBA analysis focused on the renewal component of the contemplated investment: B/C Ratio (ten-year risk reduction): 0.453</p>	



B/C Ratio (TCO): 0.224

5.2. Distribution

<p>Name & Synopsis: <i>Critical Spares Purchases</i> – proactive procurement of spare substation power transformers and/or circuit breakers.</p>	<p>Projected 2026 Investment: \$5.3M</p>
<p>Basis for Action: Results of demographic survival analysis of substation transformer and circuit breaker units in relation to known near-term project plans involving renewal of this types of equipment and in consideration of the current equipment lead times.</p> <p>Cost-Benefit Analysis: B/C Ratio (ten-year risk reduction): 0.624</p>	

Programs T3 and D4: Reactive / Inspection-Driven System Renewal

1. Basis for Action

Results of asset inspection and testing activities that identify damage, deterioration or other current or impending deficiencies on distribution line and substation assets, which warrant near-term intervention by way of replacement or reinforcement with either like-for-like or higher-rated plant.

2. Cost-Benefit Analysis Considerations

Liberty’s asset inspection cycles follow the guidelines of the Missouri Administrative Code *tit. 20 § 4240-23.020*, with the details provided in Program Summary D3 section 2.1.1. The vast majority of capital work in this Reactive / Inspection-Based Program stems from results of pole inspections and testing, which follow a 4-year patrol cycle for urban poles, 6-year patrol cycle for rural poles, and a 12-year intrusive inspection cycle for all poles older than 12 years of age. In 2026, Liberty plans to invest approximately \$16 million into reactive pole replacement work (Transmission and Distribution combined) stemming from inspection and testing recommendations.

2.1. Quantitative Cost-Benefit Analysis Methodology

The core aspect of cost-benefit evaluation of future reactive work informed by inspection / testing findings lies in prioritization of work based on its deemed criticality to system safety, operational integrity and reliability. By scheduling and executing the work in accordance with the criticality-based prioritization, Liberty ensures that less critical work is deferred for an appropriate period of time, to optimize the amount of asset service life consumed before the identified deficiencies present imminent operation risks. As discussed in the previous section, based on its recent experience, Liberty has identified a



near-term plan for further improvements to this process to deliver more efficient investment outcomes. Moreover, with the recent introduction of the CBAT tool and risk-based asset management methodologies more generally, Liberty has now defined the next frontier of its quantitative asset management evolution. To begin exploring the new tools and processes, Liberty subjected the 2026 group of reactive investments for both poles and substation assets to quantitative cost-benefit evaluation using the CBAT tool. The following methodology was used:

Step 1: (a) Where specific assets slated for replacement or reinforcement are known, estimate their failure probability based on the combination of their age and condition (if available) applied to the relevant asset class failure curve. Where specific assets slated for renewal are not identified (e.g., for trended miscellaneous substation rebuild work), randomly select a proxy group of assets based on the identified trended investment volume from the oldest decile of the relevant asset class, and use their condition and demographic data to estimate failure probability over the next decade.

Step 2: Using available Ice Calculator 1.0 CIC values and the system connectivity model, explore the criticality and identify the value of lost load downstream of the assets in scope to estimate the outage cost avoidance value, which will form the economic benefit stream in the CBA calculation, along with assumptions of environmental and safety cost mitigation of low-probability catastrophic failure events.

Step 3: Using all of the above variables (assets' failure probability estimate, CICs downstream of the assets, and project cost estimates), derive the following metrics:

- Benefit to Cost (B/C) Ratio of planned asset replacement based on the PV of 10-year asset failure risk reduction.
- Total Cost of Operation (TCO) reduction, which estimates the value of performing the work now vs. deferring it to a future point in time over a 10-year evaluation period (during which the assets would be subjected to an increasing failure probability and an emergency renewal cost premium – should failure occur, net of the incremental value derived from keeping the asset in service).

Step 4: To benchmark the calculated risk mitigation value of the assets in scope, planners took an additional stage to compare the aggregate risk mitigation value of the contemplated 1,600 pole replacement (calculated as the aggregate failure probability eliminated through pole replacement) with median failure probability across all the remaining poles. In this way planners could assess the estimated risk mitigation value in two ways: (a) by comparing the aggregate risk being removed from the system to the average risk remaining across all assets, and (b) by comparing the percentage of the asset class being replaced with the percentage of asset class risk being removed.



3. Budgeting Considerations

Budgets for reactive renewal work are developed and amended on the following factors:

- Quantity of equipment recommended for renewal through inspections, including any backlogs from prior years;
- Assessment of work execution capacity (internal and contractors) available to the program;
- Evaluation of Company-wide investment priorities and constraints over the relevant planning period across all portfolios and the ensuing budgetary implications;
- Work execution bundling and scheduling work seeking to maximize the throughput of the work program scheduled for delivery;
- Evaluation of other programs' intended scopes for the relevant planning timeframe to explore opportunities for incremental work execution synergies;
- Monitoring of in-year changes to budgetary availability across all relevant portfolios to implement any adjustments that may be required;

As discussed above, another critical (though indirect) budgetary lever available to the Company is its ongoing exploration of improvement opportunities in asset analytics and program delivery. Process changes such as those pertaining to contemplated inspection frequency changes, scheduling parameters and the ensuing targeted execution timelines, create opportunities to maximize the expected utility of annual investments.

4. Performance Metrics

Liberty proposes the following metrics to be reported on a lagging basis, with 2026 being the first year over which this data would be tracked and assembled for reporting in the 2026 PISA Update. These metrics are new for the Company and are being advanced as means of furthering its own understanding of asset management analysis and the ensuing work delivery. The Company welcomes stakeholders' feedback on these metrics following their review of this document.

Median Age of Poles with Priorities 1 and 2 non-conformances identified.	49.3 years
Net Annual Backlog Additions (subtractions)	(384)

5. Individual Investments Exceeding \$1M

5.1. Transmission

Name & Synopsis: <i>Replace Bad Order Transmission Poles</i> – planned replacement of poles previously flagged for non-conformances during inspection	Projected 2026 Investment: \$2.3M
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<p>Basis for Action: Findings of visual and/or intrusive inspections, triaged by criticality and further analyzed by internal planning staff to optimize the renewal delivery.</p> <p>Cost-Benefit Analysis:</p> <p>B/C Ratio (ten-year risk reduction): 0.0110 – note that the low benefit-to-cost ratio is in part due to the fact that the CBAT / ENGIN platform does not yet incorporate the inspection data that would de-rate those poles automatically to increase their effective age. Moreover, as Liberty is increasingly replacing the legacy poles with higher-rated units (e.g., larger poles or fiberglass crossarms), the additional costs can be expected to drive the B/C ratio down, until such time as the Company gains sufficient experience to be able to make appropriate adjustments for this issue.</p> <p>B/C Ratio (TCO): -0.234 – performing the work in 2026 generates an estimated 10% lifecycle cost savings relative to hypothetically delaying the work by a decade (which is in any case not feasible given the identified deficiencies that warrant rectification).</p>
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5.2. Distribution

<p>Name & Synopsis: <i>Replace Bad Order Distribution Poles</i> – planned replacement of poles previously flagged for non-conformances during inspection</p>	<p>Projected 2026 Investment: \$14.7M</p>
<p>Basis for Action: Findings of visual and/or intrusive inspections, triaged by criticality and further analyzed by internal planning staff to optimize the renewal delivery.</p> <p>Cost-Benefit Analysis:</p> <p>B/C Ratio (ten-year risk reduction): 0.107 – note that the low benefit-to-cost ratio is in part due to the fact that the CBAT / ENGIN platform does not yet incorporate the inspection data that would de-rate those poles automatically to increase their effective age. Moreover, as Liberty is increasingly replacing the legacy poles with higher-rated units (e.g., larger poles or fiberglass crossarms), the additional costs can be expected to drive the B/C ratio down, until such time as the Company gains sufficient experience to be able to make appropriate adjustments for this issue.</p> <p>B/C Ratio (TCO): -0.234 – performing the work in 2026 generates an estimated 10% lifecycle cost savings relative to hypothetically delaying the work by a decade (which is in any case not feasible given the identified deficiencies that warrant rectification).</p>	



<p>Name & Synopsis: <i>Distribution Overhead Lines</i> – blanket project to accommodate like-for-like replacement of functionally failed overhead equipment</p>	<p>Projected 2026 Investment: \$4.3M</p>
<p>Basis for Action: Findings of visual/detailed inspections, field issues identified by crews or members of the public, equipment faces imminent risk of functional failure or requires replacement to enable mitigation of other failed equipment, triaged by criticality and further analyzed by internal planning staff to optimize the renewal delivery.</p> <p>Cost-Benefit-Considerations:</p> <p>B/C Ratio (ten-year risk reduction): 0.202 – since this is a blanket project and the individual equipment to be replaced is not yet known, this number is an average measure of risk reduction for replacement of any given overhead equipment. Note that the higher risk reduction is a function of the relative age of overhead equipment in the system.</p> <p>B/C Ratio (TCO): -0.114 – performing the work in 2026 generates an estimated 11% lifecycle cost savings relative to hypothetically delaying the work by a decade (which is in any case not feasible given the nature of the work which this blanket project entails).</p>	

Program D5: Emergency System Repairs

1. Basis for Action

The presence of asset failures accompanying reported customer outages during normal or severe weather conditions, which must be rectified to enable power restoration to affected customers and/or eliminate imminent public or employee safety risks.

2. Cost-Benefit Analysis Considerations

As stated above, while Liberty’s current approach to the planning and budgeting for emergency / storm response investments is based on historical trending of prior year expenditures for the same categories, the Company did conduct a CBAT calculation run for this program’s expected 2026 investment value. The calculation followed the following methodology:

Step 1: Since it is impractical to assume which portion of the distribution system will be affected by storm events in 2026, Liberty took the entire distribution plant with the exception of underground cable and conduit as a starting point for this calculation. Planners calculated the overall risk cost of the assets in scope, by estimating the probability of their failure based on the application of failure curve analysis to the available demographic and condition information, and estimating the impact calculated by way of



available CIC estimates from ICE Calculator 1.0 and actuarial assumptions for environmental and safety costs for low probability / high impact catastrophic failures.

Step 2: Using the unit cost estimates for all asset classes, Liberty calculated the estimated total replacement value of the system equipment in scope (note that this is a high-level calculation used only for planning analysis purposes that omits a significant degree of detail that would be required to deliver a commercial estimate, for example).

Step 3: Using the budgeted dollar amount for the 2026 storm response expenditures, the Company estimated what percentage of the overall system risk would be commensurate to this dollar amount had the assets been replaced proactively. Because the Company assumed that most asset classes could be theoretically impacted by weather events, no specific asset classes were taken as a basis. Instead, average risk for the entire system was calculated. Liberty then applied the resulting estimated average system-wide renewal B/C ratio to the dollar amount dedicated to storm outage rectification in 2026, to calculate its estimated value proposition.

Step 4: As with other investments that underwent the CBAT analysis, the resulting 10-year renewal and TCO B/C ratios are provided in the associated investment summary document at the end of this program summary. The Company acknowledges that the described methodology represents a high-level approximation only, and many of its assumptions warrant significant refinement. For example, while substation infrastructure can be affected by bad weather – this is usually associated with low-probability events like tornadoes. While tornadoes do periodically occur in Liberty’s service territory and have historically caused significant devastation to electricity infrastructure – the current analysis does not contain a quantitative qualifier that would appropriately reduce the probability of weather-induced damages to substation equipment. This and other related adjustments represent future improvement frontiers for the Company’s asset management analytics work stream.

3. Budgeting Considerations

The budget for emergency outage restoration capital expenditures is determined on the basis of historical trending and is adjusted in-year depending on the analysis of expenditures to date relative to the historical experience. In the event where originally budgeted amounts may end up being insufficient, Liberty reallocates the budgeted amounts from other budgetary categories where flexibility to do so in-year exists. As one example, certain Proactive Reliability-Driven Renewal investments discussed in program summary D3 can be re-scoped or deferred to provide additional budgetary flexibility. In the event where unanticipated storm expenditures exceed its budgetary flexibility, Liberty may consider other available means of funding the available to it through the regulatory framework.

4. Performance Metrics

Liberty had proposed the following metrics to be reported on a lagging basis, with 2025 being the first year over which this data would be tracked and assembled for reporting in



the 2026 PISA Update. The ability to accurately report on the first metric is a direct function of the availability of age information for affected equipment and also ties in with Liberty's ongoing data collection efforts highlighted in program D7. For 2025 not enough equipment age information was available to report on the first metric. The Company welcomes stakeholders' feedback on these metrics following their review of this document.

Median age of overhead equipment destroyed beyond repair by poor weather events	#
Actual vs. Planned Emergency Response Investments: 3-Year Rolling Average	296 %



5. Individual Investments Exceeding \$1M

<p>Name & Synopsis: <i>Storm Outages Blanket</i> – annual budgeted amount for outage response expenditures during poor weather events.</p>	<p>Projected 2026 Investment: \$6.0M</p>
<p>Basis for Action: Outage notifications received by the Company’s Customer Care and Dispatch functions. Specific type of work performed depends on the line response crews’ assessment of cause of interruption, damage sustained and feasible means of restoring power safely and reliably, and as quickly as feasible.</p> <p>Existing Asset Demographics & Condition: Not specifically applicable, as virtually any component on the distribution system – including brand new assets can sustain damage and contribute to an outage (e.g., vegetation contact, motor vehicle accident involving collision with utility infrastructure, etc.).</p> <p>Cost-Benefit-Considerations:</p> <p>B/C Ratio (ten-year risk reduction): 0.720 – note that in conducting this analysis, Liberty assumed that all types of asset classes aside from underground cables could theoretically sustain damage by poor weather events and require emergency rectification. Since the expenditures associated with this program are completely non-discretionary, the Company is providing this CBA calculation as evidence of its initial efforts to incorporate quantitative risk-based asset management principles into each facet of its planning work. In the coming years, the Company will develop more nuanced methodologies for applying risk-based asset management principles to emergency restoration project budgets and historical expenditure information.</p> <p>B/C Ratio (TCO): -0.100 – please see Program Summary D5 for additional discussion.</p>	

Part III: Distribution System Service Portfolio

Portfolio Summary: Distribution System Service portfolio covers investments seeking to add new technical capabilities to increase the systems’ operational efficiency, enhance transformation capacity, or inter-area transfer capability and flexibility, expand reliance on data-driven planning and operational decisions, or augment the operational tools and processes in anticipation of emerging new ways of utilizing the grid. In general, there are three larger types of investments that make up this portfolio:

- *Equipment capacity enhancements* – such as projects where new power transformers or circuit breakers are added to existing substations facilities, or line reconductoring work to increase the affected lines’ transfer capability;
- *Digital tools to improve reliability or system operability* – such as Distribution Automation technology installations, deployment of new line or substation equipment monitoring sensors, expansions of SCADA infrastructure, or integrations



between various operational technology software components to generate incremental insights or other operational benefits;

- *Proactive Use of Emerging Technologies* – usually smaller-scale investments to test out new or emerging equipment standards, collect field data that was not previously used in planning, or develop and implement new planning and operational analytics tools like dashboards, databases, or simulation tools.

In many cases, System Service investments can have material overlap with System Renewal work – such as when aged and deteriorated low-capacity copper conductor is replaced with a higher-rated modern ACSR conductor, or when functionally obsolete electromechanical protection relays are replaced with new digital models. In the cases where such overlap exists, planners will approach the investment classification on a case-by-case basis.

Program D6: Grid Flexibility Enhancements - Project DA

1. Basis for Action

The conceptual underpinnings of Project DA stem from the results of proactive reliability improvement analysis that considered the hypothetical introduction of distribution automation (DA) schemes using autorecloser technology across Liberty’s feeders. The preliminary results of this analysis informed the creation of a grant funding application that was submitted to and ultimately selected by the U.S. Department of Energy (“DOE”) in first tranche of the Grid Resilience and Innovation Partnerships (“GRIP”) grant, enabled by the 2022 Bipartisan Infrastructure Legislation also known as the Infrastructure Investments and Jobs Act (“IIJA”). The resulting project, provisionally entitled “Project DA” was formally launched with the DOE in December of 2024 following a 1.5-year application preparation process and the post-selection DOE due diligence work. The Project’s overall current estimated cost is \$120.1M, of which \$47.5M will be eligible for reimbursement by the DOE. The 2026 planned capital expenditure net of the DOE grant is \$8.9M.

The project seeks to add another dimension to Liberty’s reliability improvement efforts by segmenting the relevant circuits and equipping electrically adjacent circuit interfaces with autorecloser devices. In equipping the DA system with a telecommunications backbone grounded in Advanced Metering Infrastructure (AMI) mesh network technology and integrated into the company’s Outage Management System (OMS), Liberty also stands to significantly advance the digital transformation of its distribution field operations and create opportunities for incremental data-driven insights to further improve its planning processes.

2. Cost-Benefit Analysis Considerations

The key inputs for the original analysis that drove the work preceding the GRIP application were the (a) estimated costs of autorecloser deployment and sectionalization work, calculated using general per-device and per-feeder unit cost assumptions; (b) ICE Calculator 1.0 Value of Lost Load estimates configured for Missouri and applied to the



counts and types of customers present on each evaluated circuit; (c) historical reliability data by feeder and cause code - to determine the reliability baseline that was amenable to improvement thorough DA technology deployment.

As noted above, Liberty expanded the scope of the project to account for the GRIP program application requirements and maximize the value of potential investments that could be completed within the project's scope. A key cost-benefit consideration driving this scope expansion was the anticipated impact of the DOE's cost contribution that would effectively act as a Contribution in Aid of Construction (CIAC) for the eligible portion of the project. In consideration of this benefit (which amounts to \$47.5M or 40% of the project's latest total cost estimate), Liberty expanded the scope of the project to more feeder locations, and a more comprehensive technology stack solution that will set up the Company for future frontiers of its grid modernization journey, beyond the capabilities and benefits specifically accounted for in the Project DA plan.

3. Budgeting Considerations

As Liberty discusses in testimony submitted as a part of a recent Missouri rate application, there are certain components of the project costs that are not typically included in a distribution capital project, but which are required by the terms of the DOE grant. Among them are extensive incremental reporting requirements, and the expenditures associated with maintaining compliance with the Davis Bacon Act. These and other related expenditures are mandatory in order to maintain eligibility for reimbursement of the DOE's portion of the project's overall costs. Moreover, the DOE rules do not permit the award recipients to recoup the costs they incurred before the DOE funding was formally confirmed. In Project DA's case, this means that the costs incurred before October of 2024 will not be eligible for DOE funding contribution. Notwithstanding these limitations, the overall financial value of the DOE award and the transformative nature of the project on Liberty's field operations far outweigh the impact of marginal incremental costs that the Company would not incur but for the DOE grant.

4. Performance Metrics

Liberty proposes the following metrics to be reported on a lagging basis, with 2026 being the first year over which this data would be tracked and assembled for reporting in the 2027 PISA Update as the first DA installation are not scheduled to take place until early 2026.

SAIDI Improvements on DA-Equipped Circuits – 3-Year Rolling Average	%
Percentage of Customer Base Served by DA Infrastructure	%

5. Individual Investments Exceeding \$1M

This program entails a single, multi-year investment project with a B/C Ratio (ten-year risk reduction) of 0.886.



Program D7: Risk-Based Planning and Connectivity Model Enhancements: Field Data Collection

1. Basis for Action

Consistent with Liberty’s 2025 PISA filing, this project is a multi-year investment to increase the availability of demographic and condition asset records for distribution equipment deployed across Liberty’s service territory.

2. Cost-Benefit Analysis Considerations:

The 2026 component of this data collection initiative is \$1.5M and will increase the data availability on approximately 17% of Liberty’s overhead distribution equipment including poles, conductor, and transformers. This will further improve our asset management and planning process and enable greater analytics using the CBAT tool for investment decision making.

3. Budgeting Considerations

The cost estimate is a product of a Request for Proposals (RFP) process that Liberty administered in late 2024 to secure the most competitively priced offerings from multiple existing and new vendors specializing in field inspections. As such, the budgeted costs are grounded in fit-to-purpose competitive procurement work.

4. Performance Metrics:

Liberty had proposed the following metric to be reported on a lagging basis, with 2025 being the first year over which this data would be tracked and assembled for reporting in the 2026 PISA Update. As of the submission of this report, the 2025 field data collection results are still in the data validation phase and have yet to be fully received from our inspection vendors. As such it is not possible to report on the 2025 results yet.

Asset Data Availability Index Improvements for Overhead Infrastructure	%
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5. Individual Investments Exceeding \$1M:

Not applicable as this program entails a single, multi-year investment project which itself does not replace transmission or distribution assets. Therefore, the benefits are not quantifiable using the methodology outlined in Part II, however a method to quantify the payback period has been proposed above.

