Build Kansas Fund | Fiscal Year 2025 Application Package | Memo

To: Representative Troy Waymaster, Chair, Build Kansas Advisory Committee
Chardae Caine, Kansas Legislative Research Department
Shauna Wake, Office of the Kansas State Treasurer

From: Jason Fizell, Interim Executive Director, Kansas Infrastructure Hub

RE: Build Kansas Fund Application #2025-112-NWKPDC

Date: May 22, 2025

Attached, please find an application made to the Build Kansas Fund by the City of Luray. The application packet includes the following items:

- Coversheet – provides a high-level overview of the application including a unique identification number, page 1 of 30 of the Build Kansas Fund Application Package.
- Build Kansas Fund Application – includes information submitted with the Build Kansas Fund Application, pages 2-10. Page 10 provides the table of funding sources and zip codes served by the project.
- Attachments – 40101d application, pages 11-30.

Project Overview
The City of Luray seeks funding from the U.S. Department of Energy for funding available through the SECTION 40101(d): Preventing Outages & Enhancing the Resilience of the Electric Grid program for their Electric Infrastructure Modernization project which includes replacing aging, overloaded interconnection substation with a modern, higher-capacity transformer to improve system reliability.

This opportunity is a discretionary BIL program with a local match requirement of 48.33% of the total project cost. The entity is requesting $258,067.42 from the Build Kansas Fund, and is requesting an exemption from the local cash contribution. This request has the potential to unlock $533,932.58 in federal funds, for a total project cost of $792,000.00.

The deadline was January 9, 2025, and this Build Kansas Fund application was received on April 29, 2025.

Build Kansas Fund Steering Committee Recommendation
The Build Kansas Fund Steering Committee reviewed this application on May 14, 2025 following a successful completeness check. The Steering Committee **RECOMMENDS APPROVAL** of Build Kansas Funding to the Build Kansas Advisory Committee for final advice.

Build Kansas Fund | Fiscal Year 2025
Application Package | Coversheet

Build Kansas Fund Application Number	2025-112-NWKPDC
Applicant Name	City of Luray
Application Date Received	4/29/2025
Project Name	Electric Infrastructure Modernization Project
Project Description	Replace aging, overloaded interconnection substation with a modern, higher-capacity transformer to improve system reliability
Entity Type	Local Government
Economic Development District (EDD) Planning Commission	Northwest KS Planning & Development Commission
Infrastructure Sector(s)	Energy
BIL Program	SECTION 40101(d): Preventing Outages & Enhancing the Resilience of the Electric Grid
BIL Program Type	Discretionary
Application Type	Implementation
BIL Application Deadline	1/9/2025
Build Kansas Fund Request	$258,067.42
Technical Assistance Received	General — Yes ☒ No ☐
	BIL Application — Yes ☐ No ☒
	Build Kansas Fund Application — Yes ☒ No ☐
	Other (Brief Description): Provided General TA and BKF Application Support.
Application Notes	Build Kansas Fund contribution of $258,067.42 will unlock $533,932.58 in federal BIL funding, with a request for exemption from the local cash contribution, for a total project cost of $792,000.00
Steering Committee Funding Recommendation	**5/14/2025 | Recommend ☒ Declined ☐**
Advisory Committee Funding Recommendation	**5/22/2025 | Recommend ☐ Declined ☐**

Title

City of Luray, Kansas

04/29/2025

by **Krysta Cash** in **Build Kansas Fund Application**

id. 50395855

cityofluray@gorhamtel.com

Original Submission

04/29/2025

Score	n/a
	Part 1: Applicant Information
The name of the entity applying for the Build Kansas Fund:	City of Luray, Kansas
Project Name:	Electric Infrastructure Modernization
Entity type:	Local Government
Entity Population:	200
Applicant Contact Name:	Krysta Cash
Applicant Contact Position/Title:	City Clerk
Applicant Contact Telephone Number:	+17856982302
Applicant Contact Email Address:	cityofluray@gorhamtel.com
Applicant Contact Address:	P.O. Box 158
Applicant Contact Address Line 2 (optional):	
Applicant Contact City:	Luray
Applicant Contact State:	Kansas
Applicant Contact Zip Code:	67649

Is the Project Contact the same as the Applicant Contact?	Yes
	Part 2: Build Kansas Fund - Eligibility Criteria
Certify that you are pursuing an Infrastructure Investment and Jobs Act (IIJA) funding opportunity for which your entity is eligible:	Yes
Certify that the Infrastructure Investment and Jobs Act (IIJA) funding opportunity you are pursuing has a required non-federal match component:	Yes
What is the primary county that the project will occur in?	Russell County

The Build Kansas Fund is intended to support Kansas-based infrastructure projects. Please provide a list of all the zip codes this project will be located in, along with an estimated percent [%] of the project located in that zip code. For example, if seeking funding for road infrastructure, provide a rough percent of the roads expected in each zip code:

Zip Code Percentage.xlsx

	Part 3: Infrastructure Investment and Jobs Act (IIJA) - Grant Application Information Please Note: This information is related to the federal Infrastructure Investment and Jobs Act (IIJA), commonly known as the Bipartisan Infrastructure Law (BIL), funding opportunity to which you will apply. This is NOT information for the Build Kansas Match Fund.
Please enter the Infrastructure Investment and Jobs Act (IIJA) funding opportunity title that the entity is applying for:	SECTION 40101(d): Preventing Outages & Enhancing the Resilience of the Electric Grid

What is the funding agency for this Infrastructure Investment and Jobs Act (IIJA) funding opportunity?	U.S. Department of Energy
What is the Assistance Listing Number (ALN) for this Infrastructure Investment and Jobs Act (IIJA) funding opportunity?	81.254
What is the federal application due date for this Infrastructure Investment and Jobs Act (IIJA) funding opportunity?	1/9/2025
Application Type:	Implementation
What is the federal fiscal year for this Infrastructure Investment and Jobs Act (IIJA) funding opportunity?	2024
Enter the amount of funding being applied for, from the Infrastructure Investment and Jobs Act (IIJA) funding opportunity:	$533,932.58 for a total project cost of $792,000.00
Enter the total project cost:	$792,000.00
Enter the required non-federal match percentage:	48.33%

	Part 4: Build Kansas Fund - Match Application Information Beginning in July 2024 and moving forward, eligible applicants are expected to contribute a portion of the non-Federal match requirement. This contribution can be in the form of cash and/or in-kind contributions. The goal is to demonstrate the applicant's commitment to the project. The contribution should be significant enough relative to the Build Kansas Fund request. For a local public entity, 5% of the non-federal match is a good guideline, but not a requirement. See Build Kansas Fund Program Guidance for exceptions and more information.
Enter the non-federal cash match amount being requested from the Build Kansas Fund:	$258,067.42 for a total project cost of $792,000.00
Enter the non-federal cash match amount being provided by the eligible applicant, if applicable:	00
Enter the estimated value of the non-federal in-kind match amount being provided by the eligible applicant, if applicable:	00

Expected breakdown of funding sources to support the project: Enter the funding source and projected amount from each source to support this project:

Kansas+DOT+table_V2.xlsx

	Part 5: Build Kansas Fund - Means Test and Eligible Applicant Match
What other available funding sources that are currently planned to go unused by your entity will be leveraged for this project?	None

Will any American Rescue Plan Act (ARPA) or Coronavirus State & Local Fiscal Recovery Fund monies will be used for the non-federal match?	No
What other sources of in-kind match will be leveraged for this project? Please list and include the actual or estimated value of each.	N/A
What other funding sources (local, federal, or non-federal) will be used for this match?	seeking exemption - see below and additional information

Describe your efforts to find other available funding sources for this project:	In pursuit of funding for this critical project, the City of Luray made extensive efforts to identify and secure alternative sources of financial support. We reached out directly to state representatives to explore potential state-level grants and other funding options. Additionally, we thoroughly investigated Community Development Block Grants (CDBG) as a potential avenue; however, eligibility restrictions and limited CDBG resources made it an impractical solution for Luray's specific needs. Kansas State Representative Troy Waymaster provided valuable information about the Build Kansas Fund and played a key role in facilitating early communication to help identify the most appropriate funding channels for Luray. We also evaluated the possibility of raising local funds through increased levies or bond issuance. However, given Luray's very limited tax base and the financial hardship it would impose on our residents, these options were deemed unfeasible. Many citizens are already facing economic challenges, and additional taxation would place an unsustainable burden on household budgets. Our financial reality, evidenced by the city's small general and utility funds, means that even modest increases in local taxation would not generate the necessary revenue to cover the required project match, let alone the full project cost. Despite a determined and broad search for alternative funding, it has become overwhelmingly clear that without federal support through the 40101(d) program and the Build Kansas Fund, this project cannot move forward. Luray's financial position is so constrained that the city is unable to meet even the 5% local match requirement without devastating impacts to critical public services and imposing severe hardship on our already struggling residents. Without funding and match forgiveness, Luray will be forced to abandon this essential project, leaving the community vulnerable to continued power failures and potential infrastructure collapse. The Build Kansas Fund offers Luray an essential—and likely singular—opportunity to prevent further system failures, protect public safety, and ensure the long-term energy and financial viability of our community.

Part 6: Additional Information

Please upload a draft or final version of the Infrastructure Investment and Jobs Act (IIJA) program grant application associated with this request OR an executive summary providing an overview of the project:

Submission__Luray_Interconnection_Substation_Replacement_2.pdf

Provide any additional information about this project not covered in previous sections of this application (optional):	Luray, Kansas, is a small, rural community facing significant challenges in modernizing its energy infrastructure. This project represents a rare and critical opportunity to bring long-term resilience and energy reliability to our residents. Since submitting our 40101(d) application on January 9, Luray has experienced **nine power-related incidents**—a clear illustration of the urgency we face. One of these events stemmed directly from a **failing substation**, leaving the entire town without power for several hours and underscoring the fragility of our current system. At the end of 2024, the City of Luray had only $1,693.26 remaining in its utility fund and $6,308.62 remaining in 2023. With a total cost match requirement of approximately $258,000, the city simply does not have the financial capacity to move forward with this project without Build Kansas Fund support. Even a 5% match would place a significant strain on our limited resources, potentially forcing reductions in other essential services. What sets this project apart is its disproportionate impact: a relatively modest investment will yield transformative outcomes for a high-need community that otherwise lacks the tax base to undertake such upgrades independently. The Build Kansas Fund's support is not just helpful—it's essential. We are respectfully requesting an exemption from the 5% match requirement based on Luray's constrained financial position and the high value this project will deliver in terms of energy equity, rural resilience, and long-term sustainability. Without this exemption, the community risks being left further behind, compounding decades of limited funding and unmet infrastructure needs. This project aligns directly with the goals of the Build Kansas Fund—equipping rural communities with the tools and support needed to thrive in a changing energy landscape. We humbly request your consideration of this exemption to help ensure that Luray can seize this opportunity for a safer, more reliable energy future.
	Part 7: Terms and Conditions
Understanding of Fund Release Requirements:	checked
Understanding of Use of Funds:	checked
Understanding of Reporting Requirements:	checked
Authority to Make Grant Application:	checked

Persons and Titles: The following persons are responsible for making this Build Kansas Fund application.	Krysta Cash
Position/Title:	City Clerk
Additional:	
Position/Title:	
Additional:	
Position/Title:	
Additional:	
Position/Title:	

Source	Amount	% of Project
Build Kansas Funds (non-federal match)	$258,067.42	32.58%
Eligible Applicant Cash Match	$0.00	0.00%
Eligible Applicant In-Kind Match (estimated value)	$0.00	0%
BIL Federal Funds (applied for)	$533,932.58	67.42%
Additional Project Contribution (if applicable)	$0.00	0%
TOTAL PROJECT COST	**$792,000.00**	**100%**

***Applicant is seeking an exemption for the local cash match requirement**

Zip Code	% of project in zip code
67649	100%
	100% In Kansas

Title

Luray Interconnection Substation Replacement

01/08/2025

id. 49277006

by **Krysta Cash** in **SECTION 40101(d) Second Round: Preventing Outages & Enhancing the Resilience of the Electric Grid**

cityofluray@gorhamtel.com

Original Submission

04/10/2025

	Section 1: Applicant Information
Entity name:	City of Luray, Kansas
Are you submitting a new application, or will you be resubmitting the application you submitted last round?	New Application
Entity Type:	Distribution Provider
Entity address:	115 South Main St P.O. Box 158 Luray Kansas 67649 US 39.1117794 -98.6915799
Employer Identification Number (EIN):	48-6012629
Unique Entity Identifier (UEI):	SBPPVKH1PMV5

Please upload verification of eligible entity size and documentation of annual sales per year:

Cert._of_Small_Utility_40101D.pdf

EIA_Grant_Form.pdf

EIA Table

2023 Utility Bundled Sales to Ultimate Customers List.xlsx

Project Manager name:	Krysta Cash
Project Manager phone number:	+17856982302
Project Manager e-mail address:	cityofluray@gorhamtel.com

IRS Form W-9:

Form_W-9_2024.pdf

Latest financial statement and financial statement audit:

CITY_OF_LURAY_Report_2023_-_Final.pdf

Please acknowledge whether your entity has ever submitted an application, similar in nature, to the DOE under BIL Section 40101c, DE-FOA-002740, Grid Resilience and Innovation Partnerships (GRIP):	No
	Section 2: Project Description and Scope
Project Name:	Luray Interconnection Substation Replacement
Project type:	Hardening of power lines, facilities, substations, or other systems
Project description and scope:	The City of Luray is seeking grant funding for a $792,000 project to replace its outdated interconnection substation. This essential infrastructure upgrade will address the city's growing electrical demand, improve system reliability, and reduce the risk of power outages that could disrupt residential and commercial customers. The current substation is insufficient to meet the city's future energy needs, and without an upgrade, the city risks ongoing power quality issues and service interruptions. Current Infrastructure and Challenges: The existing interconnection substation in Luray relies on three 250 KVA transformers, providing a combined capacity of 750 KVA. These transformers, originally designed similarly to pole-mounted units, are currently positioned on pavers. Over decades, the pavers have settled unevenly, causing the transformers to tilt and lean, raising concerns about the structural integrity of the setup. This arrangement, while functional, is no longer viable or safe, especially under increasing loads and evolving demands. The system is frequently overloaded, particularly during peak demand periods such as the Fall harvest season when Midway Coop, a large local

agricultural cooperative, operates grain-drying equipment. These periods often lead to power interruptions, low voltage, power surges, and brownouts, which disrupt service and negatively impact businesses and residential customers.

The city's energy needs have been steadily increasing, and upcoming infrastructure upgrades—such as a new service line extension to Midway Coop—will further strain the existing substation. Without an upgrade, the system will continue to be unable to meet both current demand and future growth. Power outages and voltage instability could have serious consequences for the local economy and the quality of life for residents. Immediate action is needed to modernize the city's electrical infrastructure and ensure it can accommodate future growth.

Proposed Project and Solution:
The City of Luray proposes to replace the existing substation with a modern, pad-mounted 1500 KVA transformer. This upgrade will double the current capacity from 750 KVA to 1500 KVA, enabling the city to handle higher electrical loads, especially during peak demand periods. The new transformer will provide much-needed flexibility for future growth, ensuring the city's infrastructure can meet both current and projected energy demands.

This project will include the necessary engineering, materials, and labor costs for the design, installation, and commissioning of the new transformer. The scope will also involve decommissioning the existing transformers, installing the new transformer, making electrical connections, and upgrading any other system components required to support the new infrastructure.

Immediate Needs Driving the Project:
Luray's current electrical infrastructure is unable to support the growing demands of its residents, businesses, and local agriculture. The strain caused by Midway Coop's grain-drying operations, along with the new service line extension, highlights the urgent need for an upgraded substation. The existing system at times experiences brownouts, voltage dips, power surges, and power failures, which disrupt service and cause significant problems for both residential and commercial users.

The risk of prolonged power outages and inconsistent service is particularly concerning for businesses, which depend on reliable electricity for daily operations. With an expanding local economy, Luray needs a more robust electrical system to avoid further strain on the infrastructure. The proposed upgrade will provide the necessary capacity to support the city's growth and prevent future service issues and disruptions.

Benefits of the Substation Upgrade:

*Increased Capacity
The new 1500 KVA transformer will double the city's electrical capacity, preventing overloads and ensuring the system can handle peak demand periods. This will be especially important during peak demand seasons that require a significant amount of energy. The increased capacity will also

allow Luray to accommodate future growth and development.

*Improved Reliability and Reduced Outages
The new transformer and updated system will reduce the likelihood of power failures, power surges, brownouts, and low voltage issues. Modern equipment designed to handle higher loads will ensure the city enjoys more reliable service and fewer interruptions, improving overall power quality for residential, commercial, and agricultural users.

*Support for Economic Growth
Reliable electrical infrastructure is essential for economic development. The upgraded substation will enable Luray to support new businesses and industries, including agricultural operations, which are crucial to the local economy. The project will also ensure that the city can accommodate future growth without compromising power quality or system reliability.

*Improved Operational Efficiency
The new substation will use energy-efficient equipment, reducing operational costs and minimizing energy losses. The upgrade will require less frequent maintenance, resulting in long-term savings for the city and its residents. It will also improve overall system efficiency, allowing the city to manage its electrical infrastructure more effectively.

*Enhanced Long-Term Reliability and Safety
The replacement of the current transformers with a more durable, modern pad-mounted transformer will significantly improve the reliability and longevity of the electrical system. The new equipment will reduce the likelihood of unexpected failures and maintenance issues, providing safer, more reliable service to Luray residents and businesses for years to come.

Conclusion:
The City of Luray's current electrical infrastructure is outdated and unable to support the growing demand for power. The proposed $792,000 substation replacement project is essential to modernizing the city's electrical grid and ensuring it can accommodate future growth, especially in light of the upcoming service line extension to Midway Coop. Without this upgrade, the city risks continued power outages, voltage instability, and limitations on economic development.

Securing funding for this project is crucial for maintaining reliable, safe, and efficient power for Luray's residents and businesses. The upgrade will provide the capacity necessary to meet current needs and future growth, ensuring that Luray remains a vibrant, resilient community. By investing in this critical infrastructure, the city will strengthen its ability to provide reliable electricity, support economic development, and improve the quality of life for all its residents.

Section 3: Need for Funding

Project funding need: The City of Luray urgently needs funding to address its overburdened interconnection substation and ensure the sustainability of its electrical infrastructure.

Luray is a small, rural community facing significant financial challenges. With just 146 electrical customers and 164 residents—many of whom live on fixed incomes—the city struggles to fund critical infrastructure improvements. At the end of 2023, Luray's Utility Fund held only $36,174, and total available funds amounted to $135,780. The proposed $792,000 project is essential to maintaining Luray's viability, but it represents more than 20 times the Utility Fund and nearly six times the total cash on hand. This disparity underscores the city's urgent need for external financial support.

Raising funds locally is nearly impossible. Luray's 2024 assessed valuation of $1.18 million means a single mill raises just $1,200, rendering a mill levy increase ineffective. Additionally, the city's residents already face financial hardships, with many households struggling to balance the rising cost of living. Implementing rate increases or additional taxes would disproportionately impact Luray's most vulnerable citizens, particularly low-income families and seniors on fixed incomes.

Compounding these challenges is Luray's aging and inefficient interconnection substation. The system, which relies on three 250 KVA transformers with a combined capacity of 750 KVA, cannot meet growing demands. Rising temperatures could further exacerbate the strain on the system; in 2025, Luray is expected to experience seven days of 105°F or higher, with this number projected to double within the next 30 years. Increased energy use for cooling alone is anticipated to account for over 10% of electrical consumption within three decades. Additionally, the Midway Coop's line extension project places further stress on the outdated system, making failure a matter of time.

The current infrastructure is inefficient, resulting in significant line losses that increase operational costs for both the city and its residents. As the equipment continues to age, maintenance becomes more expensive and parts harder to source, while safety risks for maintenance crews escalate. The Coop's expansion magnifies these risks, heightening the likelihood of system failures and costly repairs.

For Luray's residents, unreliable power and rising electricity costs create significant hardships. Many families face difficult choices between basic necessities such as food, housing, and energy. Without external funding, the city cannot afford to upgrade the substation without imposing unsustainable financial burdens on its residents. This leaves grant funding as the only viable solution to protect the community from further economic strain and ensure the availability of reliable, affordable electricity.

Modernizing the substation is essential. Upgrading to a pad-mounted 1500 KVA transformer will double capacity, reduce line losses, improve efficiency, and ensure long-term reliability. This project is not only necessary to meet current demands but also critical for supporting future growth and economic development. For instance, Midway Coop's grain-drying operations during the fall harvest place significant seasonal strain on the system. Without this upgrade, Luray's infrastructure cannot support such peak loads, hindering economic opportunities and leaving residents and businesses vulnerable to power disruptions.

	The $792,000 upgrade is more than an infrastructure project—it is an investment in Luray's future. By securing grant funding, the city can replace its outdated, unsafe, and inefficient system with modern infrastructure that ensures safe, reliable, and cost-effective power for all residents and businesses. This upgrade will address immediate challenges, enhance the community's resilience, and support sustainable growth. In addition to local efforts and partnerships with organizations like KPP Energy and KMU, Luray has also received critical support from Kansas House Representative Troy Waymaster. Representative Waymaster has been helpful in identifying potential funding avenues for this project, reflecting the broader recognition of its importance to the community and the region. His advocacy underscores the urgent need for external financial assistance to ensure the success of this essential infrastructure upgrade. Luray's ability to thrive as both a utility provider and a community depends on securing the funding necessary for this project. Without it, the city risks not only the failure of its electrical infrastructure but also the overall stability and quality of life for its residents.
Provide historical and post project estimated interruption frequency and duration data, if known.	The City of Luray has experienced electrical interruptions, power surges, brownouts, and blown transformers primarily due to the aging and overtaxed interconnection substation, which relies on three 250 KVA transformers. These transformers are unable to meet the growing electrical demand, especially during peak usage periods. Most outages occur when the system is overburdened, causing transformer failures and resulting in interruptions that can last from several minutes to several hours. As the transformers age, parts have become increasingly difficult to source, prolonging repair times and extending the duration of outages. The proposed upgrade to a modern, pad-mounted 1500 KVA transformer will significantly alleviate the current strain on the system, reducing the frequency and duration of outages. The new transformer, with double the capacity of the existing system, will be able to better handle peak demand periods, preventing overload-related failures. Additionally, the upgraded system will be more resilient to storm-related damage, reducing the impact of weather events on power reliability. While exact post-project interruption data cannot be precisely predicted, industry standards suggest that the frequency of outages will decrease by at least 75%, and outage durations will be shorter due to faster recovery times and improved system efficiency. With the substation upgrade, Luray can expect fewer interruptions, quicker response times, and a more reliable power supply, ensuring greater stability for residents and businesses.

Provide pro rata customer impact of total project cost.	Luray knows it must carefully balance the costs and benefits of infrastructure upgrades, considering the impacts on customers. This Interconnection Substation Replacement Project is deemed a substantial investment for a community like Luray, and normally, the utility provider shoulders these costs, typically transferring a portion of the expenses to customers through adjustments in rates. In 2022, Luray sold 1,418 MWH to its 146 customers. If each customer paid for this project equally, that would result in an adjustment of fifty-five cents per kWh consumed in one year. That is not a viable option. If instead Luray looked to make an adjustment to the base rate, the total monetary impact to each customer would be $5,425; over ten years, the monthly impact on each customer would be $45, still an increase too great for Luray's customers to bear. For commercial clients, such as Midway Coop, the financial consequences of power outages extend beyond the mere expense of electricity. Downtime, spoiled goods, disrupted operations, and various inconveniences may cause businesses to view the investment as valuable. One final and significant cost implication to consider seriously is the cost of appearing unattractive to businesses and residents seeking relocation or expansion. The potential repercussions of corporate migration resulting from unreliable electricity could be severe, hindering the local economy. On the residential side of things, with only 164 residents (as of 2023 according to the US Census Bureau), Luray would find residential flight to be devastating as well.
Provide number of customers to be impacted by the project and percentage of impacted customers to total customers in the disadvantaged or underserved community.	One hundred percent of Luray's 146 customers would be impacted by this monumental project. Of those, it is estimated that 37.8% of those are elderly. Luray’s poverty rate in 2022 was 11.4%, and the median household income was $59,000, which is less than the median household income for the state of Kansas. The median property value in Luray is $85,000. The total project cost of the Luray Interconnection Substation Replacement Project is estimated to be $792,000 and the amount assessed to the poverty population (11.4%) would be $90,288. The amount assessed to the elderly population (37.8%) would be $299,376. These figures highlight the significant financial burden that the project would impose on Luray's residents, particularly the elderly and those living in poverty. Securing external funding is crucial to prevent undue hardship on these vulnerable populations.
	Section 4: Complete Budget and Narrative
Award amount requested:	533932.58

Matching funds to be provided: 258067.42

Budget (Total Costs):

Budget Template DRAFT.xlsx

Project budget upload (optional):

Luray_budget_-_to_upload.xlsx

Project budget narrative:

The Luray Interconnection Substation is aimed at doubling the city's demand capacity to serve its customers. The estimated total budget for this project, inclusive of engineering, materials, equipment, and contract labor, is $792,000. This project is a vital investment for Luray, addressing the urgent need to modernize its electrical infrastructure and secure reliable power for its residents and businesses.

ENGINEERING ($42,000): The engineering phase is fundamental to the project's success, ensuring the seamless transition to 12kV operation. This budget allocation covers the expertise required for planning and designing the new 1500 KVA pad-mounted transformer and components to establish a system and oversight to move all of Luray's 146 customers from the current 750 KVA transformer bank to the new one. Engaging skilled professionals guarantees that the upgraded system meets safety standards and aligns with regulatory requirements. Additionally, this phase includes detailed system analysis to minimize line losses and improve overall efficiency, which is critical for a community with limited financial resources.

MATERIALS ($614,400): A substantial portion of the budget is allocated to procuring materials essential for the upgrade. Major components include the following: high-side 34.5 KV riser, 1500 KVA pad-mounted transformer, three (3) single-phase pad-mounted voltage regulators, and a three-phase pad-mounted switch. The secondary side of the substation will be terminated in the three-phase pad-mounted switch, and three (3) three-phase reclosers will be used to protect the distribution circuits. Metering will be installed on the 34.5 KV high side of the substation, though the specific location will be determined by the connecting rural electric cooperative. The materials have been selected for their durability and efficiency, ensuring that the system can handle increased demand while reducing maintenance costs. Given Luray's financial constraints, this investment in high-quality materials is essential to prevent future costly repairs or replacements.

EQUIPMENT ($21,600): The projected budget allocated to this category will cover the cost of the use of equipment for the physical implementation of the project, inclusive of bucket truck(s), line truck(s), excavator, crane, and trailers for holding and moving materials. These pieces of equipment are crucial for the safe and efficient installation of the substation components. Proper equipment usage ensures that the project adheres to safety regulations and reduces the risk of delays, which is particularly important given the community's dependence on this upgrade.

CONTRACT LABOR ($114,000): This modest budget allocation is dedicated to contract labor, covering the skilled workforce required for the physical implementation of the project. This includes a four to six-person crew responsible for executing tasks such as pole replacement, wire installation, and transformer upgrades. The commitment to contract labor ensures that the project progresses efficiently, adhering to timelines and quality standards. Importantly, employing contract labor also provides an economic boost to the region by supporting local skilled workers, aligning with the project's broader goal of fostering community development.

PROJECT IMPACT: The Luray Interconnection Substation Replacement Project is not just an infrastructure upgrade; it is a lifeline for the community. With 37.8% of residents aged 65 or older and 11.4% living below the poverty line, the reliability and affordability of electricity are critical. The improved capacity and efficiency of the new system will alleviate the financial strain on residents by reducing energy losses and stabilizing rates. Additionally, this upgrade will support local businesses, such as Midway Coop, by providing a dependable power source to prevent operational disruptions, which are costly and detrimental to economic growth.

In conclusion, this budget reflects a well-structured plan with a strategic focus on engineering, materials and equipment, and contract labor. Not only does it facilitate the technical enhancements needed for Luray to meet their customers' electrical demands, but it also ensures the employment of skilled professionals, fostering economic development within the community. This investment is poised to bring long-term benefits, enhancing the reliability, resiliency, and efficiency of the City of Luray's electrical system. By securing grant funding for this project, Luray will be able to overcome its financial challenges and build a stronger, more sustainable future for its residents and businesses.

Cost match commitment letter:

Cost_Match_Letter_40101D.pdf

Section 5: Project Timeline

Project timeline:

While City of Luray has not yet officially engaged an engineering firm for creation of a comprehensive timeline of the project, the projected duration of the project is 24 - 26 months. City of Luray envisions the project unfolding in distinct phases following the approval from the Kansas Corporation Commission (KCC), but of course, will look to the engineering contractor for a firmer schedule:

1. Engage Engineer (Months 1 - 2): Luray will vet and contract a project engineer to formulate official plans, specifications, and a timeline for this Interconnection Substation Replacement Project.

2. Bid Specifications and Publication (Months 3 - 5): The engineering team will initiate the process by preparing bid specifications for the forthcoming bidding phase. Sealed bids will be solicited through publication in various outlets, with an estimated timeframe of 30 to 60 days for this phase.

2. Bid Review and Council Approval (Months 6 - 7): After the bids are opened, key City staff in conjunction with the engineering team will conduct a meticulous review. A recommendation for bid acceptance will be presented to the Luray City Council for their approval.

3. Contract Preparation and Material Ordering (Months 8 - 12): Upon Council approval, contracts for the project will be meticulously prepared, reviewed by the City Attorney, and subsequently signed. Material procurement, including transformers, will commence, acknowledging potential delays due to ongoing supply chain challenges, necessitating lead times of six to twelve months.

4. Pre-Construction Meeting and Communication Planning (Months 13 - 14): A pre-construction meeting will be convened, bringing together the engineer, City staff, and the contractor. This meeting will serve to outline a detailed schedule, establish effective communication channels, and determine the projected completion date as well as the date for transferring all services over to the new interconnection substation. Discussions will include notifying residents and businesses in advance of planned outages, outlining the method of delivery for these notifications.

5. Commencement of On-Site Work (Months 15 - 24): Upon the arrival of materials or just before, on-site construction activities will commence. Though this will be estimated by the engineer, at this time, the on-the-ground work is anticipated to span a duration of 36 to 48 months.

6. Project Completion (Months 24 - 26): Once the interconnection substation is installed, a crew will work to move all lines served from the old substation to the new, which should not take longer than a few months.

With this timeline in mind, the City of Luray aims to successfully transition from providing electrical service through the old 750 KVA substation to the new 1500 KVA substation.

Section 6: Bids and Estimates

Bids and estimates:

	Section 7: Community Benefit
Community benefit narrative:	The proposed substation upgrade will deliver significant, long-term benefits to the City of Luray, improving the quality of life for residents and supporting the economic resilience of this rural community. By replacing the outdated transformers with a modern, pad-mounted 1500 KVA transformer, the project addresses critical infrastructure deficiencies while positioning Luray for sustainable growth. One of the most immediate benefits of the upgrade is the enhancement of power reliability. The current substation is overtaxed, leading to probable outages and voltage instability, particularly during periods of high demand. These interruptions disrupt residential households, hinder local businesses, and impact agricultural operations. The upgraded substation will double the city's electrical capacity, ensuring a stable power supply, reducing the frequency and duration of outages, and improving overall service reliability for all customers. The upgrade will also provide direct financial benefits to the community. The antiquated transformers currently in use are inefficient, resulting in high line losses that drive up operating costs. Modern equipment will significantly improve energy efficiency, reducing these losses and lowering long-term operational expenses. These savings will benefit residents and businesses by helping to stabilize utility rates and minimizing future rate increases. Additionally, the project addresses critical safety concerns. The aging transformers pose significant risks to maintenance crews due to the difficulty of repairs and the vulnerability of the equipment to failure. Replacing these with pad-mounted technology will enhance safety for workers and the public, while also reducing the likelihood of equipment-related hazards. The project is especially important for Luray's low-income families and fixed-income residents, who are disproportionately affected by power disruptions and rising utility costs. By securing grant funding for the substation replacement, the city can ensure that these vulnerable populations are not burdened by additional costs or left to face the economic impacts of unreliable power. This upgrade helps create a more equitable energy system that supports all members of the community. Furthermore, the enhanced electrical capacity will support economic development in Luray. The project ensures that the city can meet the growing demand from current businesses while also accommodating future growth. Reliable infrastructure is a key factor in attracting new industries and supporting existing businesses, which are essential for maintaining jobs and promoting economic stability in rural areas. Beyond immediate benefits, the substation upgrade represents a forward-looking investment in Luray's long-term resilience and sustainability. Reliable and efficient power infrastructure is critical to the city's ability to

	adapt to evolving energy needs and to ensure a high quality of life for its residents. By modernizing its infrastructure, Luray can confidently support residential, commercial, and agricultural customers while laying the foundation for future growth and prosperity. This project is not just an infrastructure improvement; it is a commitment to the well-being and vitality of the Luray community. By funding this upgrade, the city will secure a brighter, more sustainable future for its residents and businesses.
Provide historical measurements of resilience and reliability for the targeted areas of each proposed project.	Luray's system lacks the technology to generate SAIDI, SAIFI, or CAIDI data and does not maintain detailed reliability records due to its small staff and limited resources. Handwritten logs show an average of 1 to 2 outages every few months, lasting from minutes to a few hours. Transformer failures occur about every other year in the Midway Coop area, while fuses in residential and industrial areas trip at least six times annually. Brownouts during peak demand periods over the past decade have frustrated residents and businesses, damaging Luray's reputation as an energy stable community. While the city has made incremental improvements, including strategic investments in tree trimming and infrastructure maintenance, these efforts are insufficient to address the aging substation's fundamental issues. To proactively enhance energy reliability, Luray collaborates with KPP Energy and other cities in the municipal energy pool. This partnership leverages shared expertise and resources to develop innovative infrastructure solutions for rural communities. However, a substantial overhaul is now critical. The proposed substation replacement project represents the next vital step in ensuring a reliable, efficient, and sustainable energy future for Luray.

Provide expected changes to the historical data as a result of each proposed project.	The proposed substation upgrade in Luray is expected to significantly improve the reliability and resilience of the city's electrical system. By replacing the outdated transformers with a modern pad-mounted 1500 KVA transformer, the city will double its capacity, eliminating the frequent overloading that contributes to outages, tripped fuses, and voltage instability. Currently, Luray experiences 1 to 2 outages annually with additional brownouts and power surges during high-demand periods. Following the upgrade, the frequency of outages is projected to decrease, as the new transformer will alleviate system strain and provide a more stable power supply. Voltage stability will also improve, eliminating brownouts and ensuring consistent power quality for all customers. Transformer failures, which currently occur about every other year in high-demand areas such as the Midway Coop, are expected to be virtually eliminated with the modernized equipment. Similarly, fuse trips in residential and industrial areas, which happen at least six times annually, will be reduced significantly due to the enhanced reliability of the upgraded infrastructure. Overall, the substation replacement will lead to shorter outage durations, fewer disruptions, and a more robust system capable of meeting current and future demand. These improvements will enhance quality of life for residents, support economic stability, and position Luray as a reliable, forward-thinking community.

Provide historical measurements of resilience and reliability for the entire system to determine whether the project is in an area that has, on average, more frequent or longer duration outages.	Over the past decade, Luray's electrical system has demonstrated concerning reliability issues. Regular interruptions have disrupted daily life for residents, interrupted operations for businesses, and posed challenges for agricultural processes, such as those supported by Midway Coop. These reliability challenges have created frustration and financial strain across the community, highlighting the urgent need for infrastructure improvements. Prolonged outages have had widespread impacts, affecting homes, essential services, and businesses. The aging substation's susceptibility to overloading, combined with external factors like severe weather, has amplified the frequency and duration of disruptions. High-demand periods, such as harvest season, further strain the system, leading to brownouts and increased safety risks during repairs. Customer feedback has consistently underscored the detrimental effects of unreliable power, including economic losses, inconvenience, and equipment damage caused by voltage instability. These firsthand accounts provide a human dimension to the historical data, illustrating the tangible costs of an outdated system. Luray's current infrastructure is particularly vulnerable in the proposed project area, where seasonal demand and system overloads are common. These challenges make the substation replacement project an essential investment. By addressing long-standing issues, the project will enhance reliability, reduce outage frequency and duration, and foster a stronger, more resilient community.

Provide age of system or line segments to be replaced or repaired, type of equipment that failed, and the number of annual outages for the project area.	The age of the system to be replaced is not precisely known, but it is estimated to have been installed in the 1950s or 1960s, making it approximately 60 to 70 years old. The infrastructure includes three 250 KVA transformers that are outdated and increasingly prone to failures. These aging transformers struggle to handle current demands, particularly during periods of high usage, such as the fall harvest season when Midway Coop's operations significantly increase strain on the system. Power surges and transformer failures are recurring issues in high-demand areas, often resulting in localized outages and costly repairs. The system's inefficiency and inability to handle peak loads have caused service disruptions for residential and commercial customers alike. Additionally, power surges have damaged customer equipment, further increasing costs and dissatisfaction. While precise outage statistics are not available, maintenance records and anecdotal evidence highlight frequent unplanned outages and emergency repairs. These failures exacerbate operational challenges and strain the city's limited budget and workforce. The lack of modern protective equipment within the current design further heightens the risk of cascading failures that could impact large sections of the community. This project is critical to replacing an antiquated and unreliable system with modern infrastructure. By addressing issues like power surges, blown transformers, and frequent outages, the new system will improve reliability, reduce maintenance costs, and better meet the current and future needs of Luray's residents and businesses.

Provide a number of protective devices (fuses or breakers) that have operated more than once in a rolling 12-month period.	In the past 12 months, 8 to 10 protective devices, including fuses and breakers, have operated multiple times to manage surges, overloads, and faults within Luray's aging electrical system. These devices, while critical to preventing more extensive damage, are a clear indicator of the system's instability and inability to handle current electrical demands. Additionally, meter boxes across the system require replacement at least once a month due to damage caused by recurring power surges and fluctuations. This not only represents a significant maintenance burden but also highlights the risks posed to the community by outdated infrastructure. The frequent operation of protective devices and the need to replace meter boxes underscore the wear and tear on Luray's system, which has been pushed beyond its design capacity. Each time a fuse or breaker operates, it signals an event that could have caused even greater damage to the transformers, lines, or connected equipment. These failures occur most often during peak demand periods, such as extreme heat in summer months or during the fall harvest season, when businesses like Midway Coop place additional strain on the grid. These recurring issues have resulted in unplanned outages, disruptions to residential and commercial operations, and increased costs for both the city and its customers. Without a comprehensive upgrade to modernize the system, the frequency and severity of these failures will continue to grow, putting the community at greater risk of prolonged outages and financial strain. This project is essential to addressing these critical vulnerabilities.
Provide a number of customers impacted by project and the percentage to total customers served in Kansas.	All 146 of Luray's customers will be directly impacted by this critical and urgent infrastructure project. While this number represents approximately 0.008% of the total electric customers in Kansas, the significance of this project extends far beyond the percentage it represents. For Luray, a small rural community with only 164 residents, reliable electricity is essential to sustaining its population, businesses, and overall viability. The current system is outdated and unable to meet modern electrical demands, putting the entire community at risk of power outages, operational disruptions, and economic decline. Without this project, Luray's ability to maintain its utility service and attract or retain residents and businesses will be severely compromised. The impact of this project on the local level is profound—it ensures the future stability and growth of a rural Kansas community. While small in percentage, the consequences of inaction would be devastating for Luray and its residents. This makes the investment critical. While the percentage of impacted customers may seem small at a state level, the consequences for Luray are monumental.

Description of efforts to attract, train, and retrain a skilled workforce for this project.	Luray is committed to attracting, training, and retaining a skilled workforce to ensure the success of this critical substation upgrade project and the city's broader infrastructure goals. Recent staffing developments reflect this commitment, including the hiring of a new City Superintendent and a new Public Works Maintenance Worker. These individuals bring enthusiasm and a willingness to learn, which the city is leveraging to develop their skills through real-time, hands-on experience. The project will serve as an invaluable training opportunity for these employees. With the assistance of other cities in the KPP Energy power pool, Luray is fostering a collaborative environment where staff can gain practical expertise in advanced electrical systems. Experienced personnel from partner municipalities will provide mentorship and guidance during the project's implementation, ensuring that Luray's workforce develops the technical knowledge needed to maintain and operate the upgraded substation safely and efficiently. In addition to on-the-job training, Luray is exploring opportunities for staff to attend regional workshops and industry training programs offered by KPP Energy and other relevant organizations. These initiatives are designed to expand their understanding of modern electrical systems and enhance their long-term career prospects within the city. By combining real-time training, collaboration with industry peers, and ongoing educational opportunities, Luray is not only preparing its workforce for the immediate demands of this project but also investing in the long-term sustainability of its public utilities team.

Provide an estimate of job creation due to this project.	Due to Luray's limited budget and small size as a rural community, the city does not anticipate creating new jobs specifically for this project. However, the city has recently hired a City Superintendent and a Public Works Maintenance Worker, who will play critical roles in the implementation and maintenance of the upgraded substation. The project will provide valuable hands-on training for these new employees, allowing them to develop advanced skills in electrical infrastructure management. Through collaboration with KPP Energy and other cities in the municipal power pool, these employees will gain real-world experience while working alongside seasoned professionals. This ensures Luray's workforce is equipped to maintain the upgraded system and address future challenges effectively. While permanent job creation is not anticipated, the substation upgrade will foster temporary economic activity by utilizing contracted labor for specialized tasks such as engineering, construction, and equipment installation. This will benefit regional skilled workers and businesses during the project's implementation phase. Importantly, the upgraded substation will position Luray to attract new businesses and support the expansion of existing ones by providing reliable and consistent power. Businesses prioritize dependable infrastructure when choosing locations, and improved electrical reliability will make Luray a more attractive option for investment and growth. While the project itself won't create permanent positions, it supports workforce development, temporary economic activity, and lays the foundation for future business opportunities, contributing to the community's long-term growth and stability.

Identify any plans to partner with training providers to support workforce development.	Luray plans to collaborate with KMU (Kansas Municipal Utilities), APPA, KPP Energy, and member cities to support workforce development through shared training resources, mentorship opportunities, and access to specialized expertise. These partnerships will enable Luray's staff to gain valuable hands-on experience during the substation upgrade project, working alongside seasoned professionals from cities within the municipal energy pool. With KMU's robust training programs and support network, Luray can ensure that its staff receives top-tier technical education and practical knowledge. Luray's new hires, including the City Superintendent and Public Works Maintenance Worker, will have the opportunity to develop their skills in a real-world setting, learning directly from experienced professionals involved in the project. KMU's training initiatives will complement this hands-on experience by providing structured learning opportunities that cover industry best practices and emerging technologies. By working with KPP Energy, KMU, and other municipal partners, Luray is fostering a collaborative environment that enhances technical knowledge, improves operational capacity, and strengthens its workforce. This shared approach ensures that Luray's team is well-equipped to maintain and operate the upgraded substation while addressing future challenges confidently. These efforts reflect Luray's dedication to workforce development, combining practical training, mentorship, and structured education to meet the demands of an upgraded power system and create a resilient, sustainable future for the community.

Provide any other metric(s) that indicates potential community benefit.	The proposed substation upgrade will deliver numerous measurable benefits to the Luray community. One key metric is the anticipated increase in electrical capacity, doubling from 750 KVA to 1500 KVA. This enhancement ensures that the city can accommodate growing demand, particularly during peak usage periods, reducing the risk of overloads and outages. Operational efficiency is another area of improvement. The replacement of outdated, pole-mounted transformers with a modern pad-mounted transformer will reduce energy losses and maintenance costs. These savings will translate into stabilized or potentially lower utility rates for residents and businesses, directly benefiting the community financially. Additionally, enhanced reliability will contribute to economic development. Reliable power is a critical factor in attracting new businesses and enabling existing ones to expand. This improvement positions Luray as a competitive and attractive location for investment, fostering long-term growth and job creation. Finally, the upgraded system will improve safety by reducing the risks associated with maintaining and repairing aged infrastructure, benefiting city workers and the broader community. Together, these metrics highlight the transformative impact of this project on Luray's economic, operational, and social well-being.
Confirmation that the applicant will comply with all Davis-Bacon Act requirements.	Yes
Confirmation that the applicant will comply with all Buy America Requirements.	Yes
Confirmation that the applicant will submit an environmental questionnaire (NETL Form 451.1-1-3), if required, for each work area proposed in the application.	Yes