John Galusha, Chairman
Arica Andreatta, Commissioner
Karl Sporleder, Commissioner

HUERFANO COUNTY GOVERNMENT
GRANT APPROVAL MEMORANDUM

Date: July 25, 2023
To: Huerfano County Board of County Commissioners
From: Carl Young, County Administrator
Re: BIL Energy Improvement in Rural or Remote Areas Grant
Attachments: Pre-Application

Summary: This is a request to apply for a US Department of Energy grant for Energy Improvement in Rural or Remote Areas. This grant does not require a match and the total request is for $1,346,630. This project will install solar panels at 129 Kansas and the Fox Theatre Walsenburg as well as a 14 hour battery backup for the Courthouse.

Requested Motion/Action:
Motion to approve the pre-application to the Department of Energy - Energy Improvements in Rural or Remote Areas program for energy improvements at the Fox Theatre Walsenburg, 129 Kansas, and the County Courthouse in the total amount of $1,346,630 with no match from Huerfano County.

Grant Program:
The Infrastructure Investment and Jobs Act, commonly referred to as the Bipartisan Infrastructure Law (BIL) authorizes DOE to invest $1 billion in energy improvements in rural or remote areas. DOE's Energy Improvements in Rural or Remote Areas (ERA) Program is managed by the Office of Clean Energy Demonstrations (OCED). OCED will provide financial investment, technical assistance, and other resources to advance clean energy demonstrations and energy solutions that benefit rural and remote communities. 1 ERA aims to fund clean energy projects with three specific goals: (1) Deliver measurable benefits to energy customers in rural or remote areas by funding replicable energy projects that lower energy costs, improve energy access and resilience, and/or reduce environmental harm; (2) Support new rural or remote energy system models using climate-resilient technologies, business structures that promote economic resilience, new financing mechanisms, and/or new community engagement practices; and (3) Build clean energy knowledge, capacity, and self-reliance in rural America.

Our Project:
This project consists of the installation of solar photovoltaics (PV) and battery storage at three Huerfano County Government facilities located in Walsenburg, Colorado. The three project scopes are as follows:

- Installation of a 25kW AC solar photovoltaic (PV) canopy car-port system at the County Dispatch Center located in the 129 Kansas Avenue facility. The installation will include design engineering, permits, earthwork, paving, support structure, solar PV modules, inverters, wiring, racking and installation labor.

- The installation of a 10 kW AC rooftop-mounted solar photovoltaic system at the Fox Theatre located at 715 Main Street. The installation will include design engineering, permits, structural upgrades, solar PV modules, inverters, wiring, racking and installation labor.
- The third element of this project is the installation of a 575 kWh battery energy storage system (BESS) at the Huerfano County Courthouse located at 401 Main Street to provide back-up power during power outages up to 14 hours. This project will include design engineering, permits, lithium-ion batteries, outdoor enclosure, enclosure HVAC system, concrete pad, trenching, switch-gear, wiring, controls and installation labor.

Alignment with County Objectives:
This project aligns with the following strategic priorities:

- INFRASTRUCTURE AND FACILITIES: Maintain, preserve, and improve the quality of County-owned infrastructure and facilities, particularly the County Road System
- RESILIENCY: Integrate disaster preparedness, risk reduction, and resilience into County operations, through training, planning, community involvement and land stewardship

Financial Considerations:
This is a federal grant that is 100% funded by the federal government. No match is required. The turn-key cost estimate for this project is $1,346,630. The cost breakdown includes the pricing for the rooftop solar PV system at the Fox Theatre ($77,000), the car-port canopy solar PV system at the Dispatch Center ($378,047) and the battery energy storage system (BESS) at the Huerfano County Courthouse ($891,000). The cost estimate is a full turn-key number that includes all final design, engineering, permits, equipment, labor, construction management, commissioning, warranty, owner-training, project closeout costs and a 5% construction contingency.

Background:
The County is in the process of implementing $2.2M worth of facility upgrades (solar PV, LED lighting, building envelope upgrades, controls, HVAC upgrades a staff engagement program and a community marketing program) identified as part of the Investment Grade Audit. This project is a continuation of that effort, fixing a portion of the project that had to be removed for lack of funding, backup power for the Huerfano County Courthouse, and a portion of the project that was not ready for implementation, solar panels at the Fox Theatre Walsenburg. The addition of the solar panels at 129 Kansas is part of our effort to renovate that building into an EOC and Dispatch Center.

Signature of the Chair

Approved ☐

Approved w/ Changes ☐

Denied ☐

PRE-APPLICATION DETAILS FOR FOA# DE-FOA-0003045

3045-1884: Huerfano County – Renewable & Resiliency Projects

Pre-Application Response

The Pre-Application response is not yet available. Please check back at a later date.

Submission Details

Abstract: This project consists of the installation of solar photovoltaics (PV) and battery storage at three Huerfano County Government facilities located in Walsenburg, Colorado. The three project scopes are as follows: (1) Installation of a 25kW AC solar photovoltaic (PV) canopy car-port system at the County Dispatch Center located in the 129 Kansas Avenue facility. The installation will include design engineering, permits, earthwork, paving, support structure, solar PV modules, inverters, wiring, racking and installation labor. (2) The installation of a 10 kW AC rooftop-mounted solar photovoltaic system at the Fox Theatre located at 715 Main Street. The installation will include design engineering, permits, structural upgrades, solar PV modules, inverters, wiring, racking and installation labor. (3)The third element of this project is the installation of a 575 kWh battery energy storage system (BESS) at the Huerfano County Courthouse located at 401 Main Street to provide back-up power during power outages up to 14 hours. This project will include design engineering, permits, lithium-ion batteries, outdoor enclosure, enclosure HVAC system, concrete pad, trenching, switch-gear, wiring, controls and installation labor.

Submission Initiated By: Mr. Carl Young (cyoung@huerfano.us) on 7/12/2023 11:23:45 AM ET

Submission Submitted By: Mr. Carl Young (cyoung@huerfano.us) on 7/12/2023 8:53:06 PM ET

Submission Status: Submitted - Edits Allowed

Topic: General Topic

UEI Number: DL84BCKRKZC7

Lead Organization: County of Huerfano

Organization Type: State and/or Local Government

Lead Organization Percent Effort (1-100): 100 %

Other Organizations No Other Organizations Listed

Key Participants:

Organization Name	Title	Salutation	First Name	Last Name	Is Lead Org
County of Huerfano	Finance Officer	Ms.	Kim	Trujillo	
County of Huerfano	Program Manager - McKinstry	Mr.	Aaron	Skroch	
County of Huerfano	Senior Account Executive - McKinstry	Ms.	Ashley	Brasovan	

Locations of Work:

Primary Location*

Address	City	State	Zip	Percentage	Is Lead Org
401 Main Street	Walsenburg	CO	81089	66	☑

Other Locations

Address	City	State	Zip	Percentage	Is Lead Org
715 Main Street	Walsenburg	CO	81089	6	☑
129 Kansas Ave	Walsenburg	CO	81089	28	☑

Total Percentage: 100

Funds and Costs:

Phase	Federal Share (DOE)	Non-Federal Share	Total Projected Costs	Proposed Cost Share Percentage
Phase 1	$1,346,630	$0	$1,346,630	0.00%

Proposed Period of Performance (months): 18

Project Lead/Principle Investigator (PI):
Mr. Carl Young
401 Main Street Walsenburg, CO 81089
719-738-3000

Business Point of Contact:
Mr. Carl Young
401 Main Street Walsenburg, CO 81089
719-738-3000

Current TRL of the proposed technology (1-9):	9
Estimate TRL the technology will reach at project end (2-9):	9
Interested in sharing application and contact information with the LPO:	No

Submission Files:

Download all files

File Name	Original Submission File	Redacted Version
Pre-Application *	3045-1884_County_of_Huerfano_PreApplication (7/12/2023 8:52:40 PM ET)	No File Uploaded

Highlighted row indicates Business Sensitive file

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EXISTING USERS WHO CAN EDIT THE SUBMISSION:

Submission Initiated By: Mr. Carl Young (cyoung@huerfano.us) on 7/12/2023 11:23:45 AM ET

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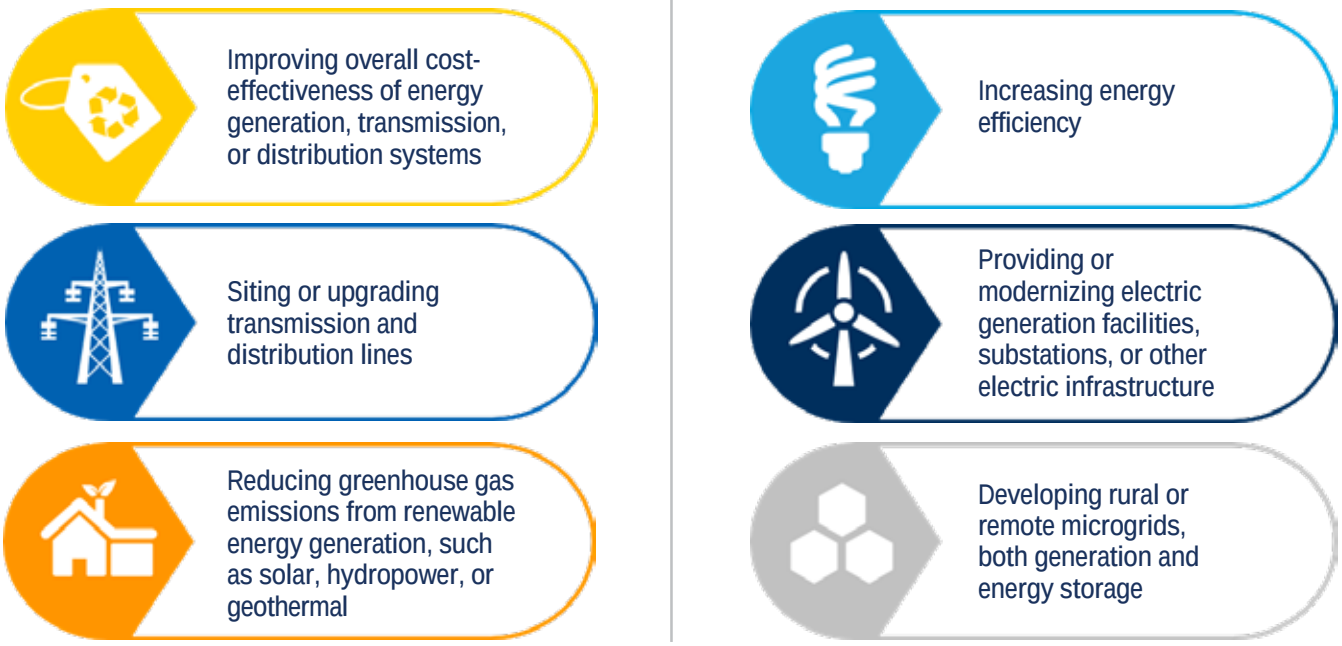
Energy Improvement in Rural or Remote Areas

Program Overview: The Energy Improvements in Rural or Remote Areas (ERA) program is releasing this funding opportunity to provide funding for small (under $5 million) clean energy projects which benefit rural and remote communities in the United States.

Deadlines: **July 13, 2023 at 5pm ET:** Pre-Application due | **October 12, 2023 at 5pm ET:** Full Application due

Eligible Applicants: Applications must identify at least one city, town, or unincorporated area in the United States (including U.S. territories) with a population of not more than 10,000 that benefits from the proposed energy improvement. The applicant and subrecipient(s) must be domestic entities.

Program Objectives



Anticipated Type of Award: Fixed Amount Grant. This grant mechanism provides milestone-based payments and significantly reduces financial reporting requirements associated with larger DOE awards. Additionally, technical assistance is available support the initial development of project concepts.

Anticipated Award Size and Funding Amount

Topic Area No.	Topic Area Title	Anticipated Number of Awards	Anticipated Cost Share per Award		Total Anticipated Fed Share
			Award Size (Fed Share)	Applicant Share	
1	Community-Driven Clean Energy Projects	10-100	$500K - $5M	$0	$50M

This FOA does not require applicant cost share.

PRE-APPLICATION TEMPLATE

Pre-Application Template

How to Apply:

1. Review the Funding Opportunity Announcement to ensure you comply with all eligibility requirements and to gain an understanding of full application requirements and terms and conditions associated with the award.
2. Download this template and fill in answers to each question below to complete your pre-application. The pre-application must not exceed 10 pages. Suggested page counts are included for each section. Pre-applications are not required to follow these page counts, but the pre-application must not exceed 10 pages.
3. Optional: Request technical assistance to support initial development of project concepts. Technical assistance can be requested from the National Renewable Energy Laboratory (NREL) here.
4. Submit the pre-application on OCED Exchange by the deadline noted above. Applications will be reviewed according to criteria in Section 5.0 of the Funding Opportunity Announcement. Based on the results of the review, DOE will invite some applicants to submit a full application.
5. Begin the registration process for the System for Award Management (SAM) and Unique Entity Identifies (UEI). See Section 4.1.2 of the FOA for more information or review additional resources here: GSAFSD Tier 0 Knowledge Base - Validating your Entity.
6. If you are invited to submit a full application, review Section 4.4.2 of the Funding Opportunity Announcement for full application requirements. Note that NREL and other national labs will provide additional technical assistance to support full application development.

Application Information (1 page)

1) Applicant Information:

Name: Huerfano County Government

Phone Number: 719-738-3000

Email Address: cyoung@huerfano.us

Mailing Address: 401 Main Street, Walsenburg, CO 81089

2) **Project Title**: Huerfano County – Renewable & Resiliency Projects

3) **Project Location**

A. City, state, and zip code of community or communities benefitting from the proposed project:

Walsenburg, CO, 81089

B. Population of community (must be less than 10,000 inhabitants to qualify:

6820

C. Project Location

Physical Address (or crossroads or other identifying geographic feature):

Three Locations: 129 Kansas Avenue, 401 Main Street, and 715 Main Street, Walsenburg 81098

City, state, and zip code, if project will be constructed outside the community that will benefit:

D. Community point of contact, if different from applicant

Name: Carl Young

Title: Huerfano County Administrator

Email address: cyoung@huerfano.us

Phone number: 719-738-3485

Project Overview (2 pages)

4) Describe the proposed clean energy project, including a summary of the energy technology or infrastructure to be constructed or improved.

This project consists of the installation of solar photovoltaics (PV) and battery storage at three Huerfano County Government facilities located in Walsenburg, Colorado. The three project scopes are as follows:

1. Installation of a 25kW AC solar photovoltaic (PV) canopy car-port system at the County Dispatch Center located in the 129 Kansas Avenue facility. The installation will include design engineering, permits, earthwork, paving, support structure, solar PV modules, inverters, wiring, racking and installation labor.
2. The installation of a 10 kW AC rooftop-mounted solar photovoltaic system at the Fox Theatre located at 715 Main Street. The installation will include design engineering, permits, structural upgrades, solar PV modules, inverters, wiring, racking and installation labor.
3. The third element of this project is the installation of a 575 kWh battery energy storage system (BESS) at the Huerfano County Courthouse located at 401 Main Street to provide back-up power during power outages up to 14 hours. This project will include design engineering, permits, lithium-ion batteries, outdoor enclosure, enclosure HVAC system, concrete pad, trenching, switch-gear, wiring, controls and installation labor.

5) Mark which of the following objectives will be addressed by the proposed clean energy project. Mark all that apply. Selections must be supported by the project description provided in Question 4.

X Improving overall cost-effectiveness of energy generation, transmission, or distribution systems;

__ siting or upgrading transmission and distribution lines;

X reducing greenhouse gas emissions from energy generation by rural or remote areas;

__ providing or modernizing electric generation facilities;

__ developing microgrids; and/or;

X increasing energy efficiency.

6) Provide an estimate of the total project costs and a short rationale for the estimate.

The turn-key cost estimate for this project is $ 1,346,630. The cost breakdown includes the pricing for the rooftop solar PV system at the Fox Theatre ($77,000), the car-port canopy solar PV system at the Dispatch Center ($378,047) and the battery energy storage system (BESS) at the Huerfano County Courthouse ($891,000). Cost

estimates were provided by McKinstry who is a design-build performance contractor based out of Golden, Colorado. The cost estimate is a full turn-key number that includes all final design, engineering, permits, equipment, labor, construction management, commissioning, warranty, owner-training, project closeout costs and a 5% construction contingency. The size of the solar PV system at the Dispatch Center is based on the largest system the local electric utility provider (San Isabel Electric Association) will allow. The size of the solar PV system on the Fox Theatre is based on the size of solar PV system needed to offset 100% of the electric use for the facility – making this building net zero electricity. Lastly, sizing for battery energy storage system (BESS) is based on both the peak kW demand and largest cumulative kWh consumption over a 24-hour period for the facility. There is limited American made, BABA compliant solar and battery energy storage producers currently, the county has carried an allowance to meet BABA compliance if in the future more domestic producers are available. Davis-bacon wage requirements will be met for all projects.

7) Who will own the project (i.e., city government, installer/developer, electric utility, etc.)?

Huerfano County Government

Project Benefits (3 pages)

8) Briefly describe the community that will be impacted by the project, including a description of the community's energy needs or priorities. Needs can be described using qualitative descriptions or metrics, such as those found in the Climate & Economic Justice Screening Tool (CEJST), DOE's Energy Justice Dashboard, the U.S. Environmental Protection Agency's (EPA's) EJScreen.

Huerfano County is a rural County that includes 1,593 square miles in south central Colorado, east of the Sangre de Cristo Mountains and south of the Wet Mountain Valley. A historic crossroads in the American West, the County developed after commercial coal mining began near Walsenburg in 1881 at the Walsen Mine. By 1890, the region around Walsenburg became the most important coal producing region in Colorado, attracting thousands of foreign workers who formed ethnic communities in the nearby towns, which supported no fewer than fifty mines at the high point of the county's mining boom. The mines began to close not long after World War 2 and the County's economy has never recovered. Today, Huerfano County has one of the oldest populations by median age in the State with an economy driven by government, tourism, and agriculture.

The 08055960600 census block, where this project is located is identified in the Climate and Economic Justice Screening Tool as disadvantaged, having met the burden threshold for projected wildfire risk, energy cost, abandoned mine land, low median income, low income, and high percentage of people with less than a high school diploma. According to the EJScreen Tool the County contains both a Justice40 disadvantaged community and a EPA IRA disadvantaged community.

Despite these challenges the County aims to improve its resiliency in the face of climate change and meet the State's goal to be powered by 100% renewable energy by 2040 by maximizing opportunities to deploy renewables and improve efficiency.

9) Describe the project team's relationship to the community and community engagement strategy, including efforts to build support for the project.

As McKinstry has already done work with Huerfano County, the community and project team relationships are strong. McKinstry completed an Investment Grade Audit (IGA) for Huerfano County in December 2022 and is in the

process of implementing $2.2M worth of facility upgrades (solar PV, LED lighting, building envelope upgrades, controls, HVAC upgrades a staff engagement program and a community marketing program) identified as part of the Investment Grade Audit. The strategy is to gain further support from the citizens of the county by utilizing the contractors located in Huerfano County as well as Southern Colorado which will bring work to the area. McKinstry worked with the local utility provider and local contractors on the previous project which funneled the majority of the contract dollars back into the area. If successful on this grant, the County would utilize the same approach to make sure the community and area-based contractors also benefit.

10) Describe any anticipated benefits of the proposed project, and the project team's efforts align these benefits to the community's energy needs and priorities discussed in the previous question.

The benefits to this project include increasing facility energy efficiency, reducing fossil fuel consumption, advancing electrification, increasing resiliency and transitioning to renewable electrical generation. Additional benefits to the community would be showcasing Huerfano County as a leader in green technology, promoting energy efficiency improvements regionally, and making the County more sustainable for future generations. The installation of 35 kW total of renewable solar energy systems will offset the total electric energy use at Fox Theatre and Dispatch Center by 48%. The battery energy storage system at the Courthouse will increase the resiliency of this key County facility where high winds often result in power outages. These outcomes will represent significant progress toward community greenhouse gas emission reduction, resource use and renewable electricity aspirations. Finally, implementation of these systems will also support Southern Colorado's "Just Transition" and clean energy economy and enable Huerfano County to demonstrate local leadership on efficiency and renewable energy and set an example for other commercial and residential facilities looking to install batteries and solar.

11) Describe any anticipated negative impacts of the proposed project, and the steps the project team will take to minimize these impacts. Please describe the extent to which the project may disproportionately impact vulnerable populations within the community.

The only negative impact of the proposed project is that by adding new solar and battery systems, there will be a minor increase in maintenance for Huerfano County maintenance staff. To minimize these impacts, McKinstry will train maintenance staff in the efficient operation and maintenance of these systems and also present the County with an option for McKinstry to provide the future annual preventative maintenance.

Technical Approach (4 pages)

12) Describe why the technology was selected. Include a description of any alternatives considered and why the selected technology is best suited to the community and the proposed purpose.

Solar PV was selected because it is a cost effective and reliable form of renewable energy generation, and the county has a desire to increase their renewable portfolio. The maximum size (limited by the local utility provider, San Isabel Electric Association) allowed for each solar PV site is 25 kW AC. The maximum size system (25 kW) will be installed at the Dispatch Center. A south-facing car-port canopy system, located in the parking lot was selected due to its ample morning and mid-day sun exposure and because the existing roof structure does not have the

structural capacity to support a new PV array. Since a 10 kW, roof-mounted PV system 100% offsets the Fox Theatre electrical usage, the utility set maximum 25kW limit doesn't apply at this site. The Courthouse currently has no means of backup power, so a 700 kWh, lithium-ion battery energy storage system was selected to provide a low environmental impact method of providing back-up power and improving the resiliency of the facility.

13) Provide justification that the proposed technology is commercially available. Only commercially available technology will be considered. Technology may be considered commercial if:

A. Technology is frequently installed for similar purposes throughout the region,

B. Needed equipment can be purchased or leased from commercial vendors for the intended purpose, or

C. The technology can be warrantied.

Solar PV has been around since the 1980s; it is not a new technology. It is a widely available from multiple commercial vendors, proven to be reliable and 2.8% of the total U.S electricity is produced by solar power. In Colorado alone, there is 2,671 megawatts of installed solar, enough to power 515,688 homes. All systems will be warrantied by McKinstry for a period of 1-year for both parts and labor and any manufacturer warranties that extend beyond this period (inverters, solar modules and batteries) will be transferred to the customer at construction close-out. Typically, panels and inverters hold parts warranties of 10 to 25 years ensuring this system will be covered for a large portion of its life. The solar PV systems will meet BABA requirements. There are currently no commercially available battery energy storage systems that meet BABA requirements.

14) What is the capacity of the proposed system? Specify capacity for each of the elements below, if applicable for your project:

X_ Power generated in kW or MW: _____

__ Energy stored kWh or MWh: _____

__ Energy saved annually in kWh or MWh: _____

__ Distance (in miles) and voltage (in kV) of transmission and/or distribution lines provided: _____

15) What is the estimated system lifetime (in years): 210.85 Months (17.6 Years)

16) What is the system scale?

X_ **Facility Scale** – one building or facility.

__ **Community Scale** – more complex projects with multiple buildings.

__ **Utility Scale** – larger scale projects generating power to many facilities or providing power to the grid, typically generating 10MW or more.

17) Will the project be connected to the grid?

X_ **Yes**, the project will be connected to the grid, and power from the project will flow to the grid via transmission and/or distribution lines, substations, etc.

If yes, identify any interconnection agreements, net energy metering agreements, or arrangements/agreements required for the sale or purchase of energy: An interconnection and net metering agreement will be required between San Isabel Electric Association (the electrical utility provider) and Huerfano County.

__ **No**, the project is independent and will not be connected to any external grid.

18) Describe any work, including studies or engineering design, completed to date. What additional steps are needed to design and implement the project? A detailed workplan with milestones will be required at the full application stage.

ASHRAE Level 3 energy audits have been conducted at the Courthouse and Fox Theatre. In June of 2023, McKinstry provided an architectural, accessibility, structural, mechanical, electrical and plumbing system evaluation of the Dispatch Center. Alongside conducting evaluations, the code review and consultation with the local authority having jurisdiction (AHJ) has been completed. At the Courthouse, McKinstry worked with San Isabel Electric Association (SIEA) to identify the maximum 24-hour energy requirement to help understand the feasibility of installing battery energy storage systems. The remaining steps that would need to be completed in order to develop a shovel-ready project would be to complete the detailed design, facilitate a competitive subcontractor bid process based on the final design, issue a permit drawing set and secure the required interconnect agreements and permits. The timeframe for completing these remaining steps is 4-6 months.

19) Describe environmental regulations that will impact the project, including any permits that need to be obtained. Have necessary permits been obtained? If no, what is needed to obtain them?

There are no environmental regulations in place for the implementation of canopy and rooftop solar. McKinstry will communicate with SIEA to ensure that all proper permits will be obtained.
All jurisdictions will require a permitting fee and interconnection agency agreement with the utility provider. The permitting fee will include the building permit fee and plan review fee and will be based on the cost evaluation of the project, up to $1,000 for commercial projects. This $1,000 cap is from Colorado House Bill HB 11-1199 and will apply to all solar permits. On average, the turnaround time for each solar permit can be up to 10 days. There will not be a cost associated with the County permits but permit applications and plan reviews will still be required.

20) Describe how the project will be maintained after operation begins and the grant ends. This could include a summary of an operations and maintenance plan, operations and maintenance workforces needs, the intent to hire/contract operations and maintenance, or some other explanation.

McKinstry will fully commission all systems to ensure they are operating and performing as designed. As part of the construction close-out phase, McKinstry will train County maintenance personnel in the proper operation and maintenance of the systems including establishing a maintenance schedule to define which preventative maintenance activities should occur at designated intervals. After the 1-year warranty, the County will be responsible for operating and maintaining the solar PV and battery energy storage systems. The County will have the option of performing these maintenance activities themselves or contracting with McKinstry to provide preventative maintenance for these systems after the warranty period.