Climate Pollution Reduction Grants – Implementation Grants

Sample Workplan Outline for General Competition

*Instructions: This optional outline is intended to assist Climate Pollution Reduction Grant – Implementation Grant applicants with preparing their workplan for the general competition. Applicants are encouraged but not required to follow this outline; applications should address all of the sections (corresponding with the evaluation criteria) outlined in the Notice of Funding Opportunity (NOFO) (Funding Opportunity Number EPA-R-OAR-CPRGI-23-07). The workplan must not exceed a maximum of 25 pages. Pages in excess of the 25-page limit for the workplan (which does not include the 10-page technical appendix, 10-page budget narrative, optional budget spreadsheet, or GHG calculations spreadsheet) will not be reviewed. Please consult Section IV.B. of the NOFO for more information about the project narrative instructions, format, and content and required supplemental materials (i.e., Memorandum of Agreement, if applicable; budget narrative; and technical appendix.) and the evaluation criteria in Section V.B. Applicants should ensure that their workplans are written clearly using understandable terms. Doing so will help ensure that the evaluation team members understand the purpose and expected outputs and outcomes of the overall project.*

**CPRG Application - Board of Public Utilities, Kansas City, KS**

**Low Income Community Solar Project Alpha**

The Board of Public Utilities of Kansas City, Kansas (BPU) is a publicly owned administrative agency of the Unified Government of Wyandotte County, KS and is self-governed by an elected six-member Board of Directors. The BPU currently serves approximately 67,000 electric and 53,000 water customers. BPU’s mission is to focus on the needs of our customers, to improve the quality of life in our community while promoting safe, reliable and sustainable utilities.

The BPU is requesting funding through CPRG funding for a low-income community solar project. The BPU is requesting funding to develop one or hopefully multiple community solar projects. The goal of the project(s) is to develop a low-income community solar facility that is scaled such that it can be located in and around our disadvantaged communities to assist in grid stability, generation capability, as well as providing zero carbon power to the communities in most need. Urban communities and especially disadvantaged urban communities struggle to find ways to decarbonize their local generation due to space and transmission constraints. Community solar projects can be both a showcase of green power projects that serve the immediate need of those in the community while also reducing the need and dependency on other fuel based generating resources that would otherwise have to operate to provide that power source. These projects should be both a sense of pride in the community as well as an economic engine in the lives of those individuals it helps support.

As part of this application the BPU is requesting funding for Low Income Community Solar Project Alpha. This will hopefully be the first of multiple projects in the community that will continue to help offset some of the energy burden within the community itself. Community Solar projects are scalable by nature and thus can be designed to meet ground availability and funding but as part of Project Alpha we are requesting to build a 5 MW AC community solar project. As part of the project a minimum of 80% of the value of the energy produced from the solar array will go directly back to low-income households in the form of on-bill credits and will be used to reduce the bill of those participating households by 20%, thus putting money back into their pockets. BPU, being an administrative agency of the Unified Government of Wyandotte County, KS is in an excellent position to serve those needs as we already have accounts and relationships with those households today. As part of the Low-Income Community Solar Project A the BPU anticipates using information from LIEAP or other governmental programs as the mechanism for potential acceptance into the community solar project. Not only does this ensure that administrative costs are kept to a minimum but it also ensures that the funds are going back to households in need. It also ensures that those funds are available to both renters and homeowners which is always a challenge when distributing funding through government programs, and although the organization is consistently providing government program updates to the public this type of project will help ensure both through the visibility of the project but also through the fact of it being an internal program will help push and encourage those to apply for those programs to ensure all of those in need are receiving the benefits they deserve.

The goal of Low-Income Solar Project Alpha is to build a 5 MW AC project on ground within the low-income community we serve. Based on current estimates the BPU believes the total cost of the project will be $10.125 million. We hope to fund 30% of those costs through existing IRA tax credits with the remaining 70% coming from the CPRG funds. By developing a project with no long-term debt ensures that the value of the project goes directly to the community immediately and will be in full-effect from day one forward. Not only will this reduce the local emissions it will also add enormous financial benefits to those being served. I believe the EPA will be hard pressed to find a project as part of the CPRG funding that both reduces the overall emissions and provides the benefits at the same level as the Low-Income Solar Project Alpha. Under current estimations solar project Alpha would be expected to produce 11,382 MWh annually while reducing CO2e emissions at a rate of 2,079 lbs per MWh based on the local thermal generation fleet. This means that 23,663,178 lbs annually for the next 30+ years all while continuing to add resiliency and stability to the grid system while providing financial incentive to those households most in need.

Kansas City, KS is one of the most disadvantaged communities in the country and has one of the highest levels of poverty in the state. Based on the EPA’s own EJScreen Community Reports Kansas City, KS statistics stand out against nearly any community. Based on the report itself 42% of the population is considered low income, 63% of the residents are people of color, 8% of the households speak limited English, the average life expectancy is 69 years of age and the per capita income in just $22,478. All of these values are significantly more concerning than any other major metropolitan area in the state including Wichita and Topeka. Based on census data within the EJScreen tool it reflects that approximately 15% of all low-income residents within disadvantaged communities reside within these communities in Kansas City, KS and thus the need is enormous. Although the request for funding as part of this application is only $7.1 million, it is easy to see that this request only scratches the surface and thus the BPU will continue to strive to find other mechanisms to develop additional projects within these communities to continue to help propel this community forward and drive progress in this great community.

# Overall Project Summary and Approach

1. **Description of GHG Reduction Measures**

The Low-Income Community Solar Project Alpha is expected to be a 5 MW AC community solar project that will reduce the need for thermal generation locally while increasing power resiliency and improving resource adequacy. The project is expected to reduce local CO2e emissions by 23,663,178 lbs annually while also providing those low-income households with reduced energy burdens.

1. **Demonstration of Funding Need**

Kansas City, KS is one of the poorest communities in the state of Kansas. Approximately 15% of all low-income households within disadvantaged communities in the state reside in Kansas City, KS. Those residents have some of the highest energy burdens of anywhere in the state. The Board of Public Utilities of Kansas City, KS thus struggle to both provide reliable power while also working to reduce the strain and financial burden of utility costs for our community. Any costs that are incurred will directly and negatively impact the possibility of amount of good a project such as this can be. Not only will the success of this project improve the life of those community members in need it will do so repeatedly for years and years to come and will provide meaningful relief while also improving GHG emissions locally.

1. **Transformative Impact**

This project and hopefully more in the future will be transformative to all of Kansas City, KS but especially for those households most in need. This project will be a living breathing example of the power of community and of clean energy. This project will hopefully help prove the concept of low-income community solar, especially in middle America. The goal would be to have one or more projects that then continue to grow into more projects that both put downward pressure on rates for the community as a whole but especially for the low income. It will also act as a catalyst to showcase how solar can reduce GHG emissions from thermal power units that are primarily located within and near low-income urban areas due to the power demands and lack of overall transmission. As this project proves out the goal would be to continue to remove the need for local thermal generation thus supporting a cleaner environment for all. Low-Income solar projects have the ability to be the most transformative of any measure the EPA will review as part of the CPRG funding as it has the ability to directly impact the lives of the community and can directly impact the entire community not just subsets or individual households and can make a lasting impact for generations to come.

# Impact of GHG Reduction Measures

1. **Magnitude of GHG Reductions from 2025 through 2030**

Between the years of 2025 through 2030 it is estimated that the Low-Income Community Solar Project Alpha would reduce CO2e emissions by 64,395 metric tons. To achieve this mark during this time frame the BPU would need to receive acknowledgement early in 2024 to allow for installation by the end of 2024 or early 2025. If the project is not able to be able to obtain a Commercial Operation Date of 1/1/2025 the reduction would be pushed back but the advantage of this program is that regardless of the timing of the announcement the full CO2e emissions savings would likely be achieved through the lifespan of the solar as well as through continued enhancements.

1. **Magnitude of GHG Reductions from 2025 through 2050**

Between 2025 through 2050 the Low-Income Community Solar Project Alpha would be expected to reduce overall CO2e emissions by 279,046 metric tons over that span. This project would be a beacon of hope to a legacy of green and clean energy over the lifespan of the project. This will be a living breathing example of the power of clean energy and will be a showcase for the community. Low-Income Community Solar projects are likely one of the most visible long-lasting showcases of what the CPRG can provide to the community. It will be a conversation piece, a local treasure. Many of the projects that are showcased as part of the CPRG or PCAP are much less visible, much less impactful, and will not touch near as many lives as this project will achieve.

1. **Cost Effectiveness of GHG Reductions**

The cost effectiveness of the Low-Income Community Solar Project Alpha in terms of GHG reductions is likely immensely better than nearly any other competing investment. By investing in grid style renewables, the CPRG will likely incur the lowest cost per CO2e reduction than any other project. I have reviewed many of the projects in the PCAP and although a few projects estimate greater reductions it appears based on my knowledge some of those estimates are not nearly accurate and likely not nearly as impactful as direct solar implementation.

1. **Documentation of GHG Reduction Assumptions – Up to 10 additional pages as an appendix to the workplan (see Appendix C of the NOFO)**

The GHG reduction is based on the actual output of BPU’s own resources in the local area and thus we know inherently better than likely any other applicant how these measures will improve the local emissions and how this singular project will improve the emissions and the lives of those individuals living in our community.

# Environmental Results – Outputs, Outcomes, and Performance Measures

1. **Expected Outputs and Outcomes**

The true value of the Low-Income Community Solar Project Alpha is both in its improvement to the community in terms of GHG emissions and the lives of those living in the community, its ability to be a beacon of hope and a vision of how green energy can transform communities of need but also in its sheer simplicity. This project is simple to track and thus the community can directly see and feel the benefits each and every day. This project can and will serve as an example to communities across the country just how transformative these types of projects can be. There are so many ways to expand the reach and breadth of these types of programs through government outreach but this project can be a shining example of how those programs may provide direct measurable relief.

1. **Performance Measures and Plan**

The performance measures will be measured through an on-site meter and will be tracked just like all other resources in our fleet. These measurements will not only provide significant data for other future solar projects in the area but also serve to reflect the value of the project versus the wholesale cost of power and the ability of solar to serve the needs of the customer base during periods of heightened demand or grid challenges.

1. **Authorities, Implementation Timeline, and Milestones**

The BPU is an administrative agency of the Unified Government of Wyandotte County and thus will work directly to ensure a seamless project. At the time of announcement, the BPU will begin the process of establishing a schedule of installation. It is expected that the project could take as little as 6 months from announcement to as long as 24 months depending on development availability and panel availability. In terms of BPU project planning, it would be expected to begin immediately and would work with a number of potential developers and schools to ensure the project is completed in the shortest period possible with the greatest local impact and training opportunities for those in the clean energy field.

# Low-Income and Disadvantaged Communities

1. **Community Benefits**

No other project likely has collectively more direct community benefits than does the Low-Income Community Solar Project Alpha on a per dollar spend valuation. Not only does this directly improve direct emissions it provides on going financial benefits to the entire community, but directly to low-income households in disadvantaged communities. This project will provide benefits for likely a minimum of 30+ years and will impact all household types. It will directly act to reduce localized GHG emissions and will directly provide bill reductions on the utility bill directly each and every month. It provides for a simple solution, low overhead expenses, and measurable, impactful differences in the lives of the community.

1. **Community Engagement**

The BPU is a community run and operated organization. The Board of Directors are elected by the public. All employees live in the community we serve. We have heard and understand the desire by the community to both expand renewable generation and also the need to help support the low-income households in our community. This project serves all of those things. In addition to bringing additional green energy sources, it brings it directly into the community itself which will provide an even greater impact through the reduction of additional transmission needs and constraints, through improved air quality locally, as well as to provide a light that can be looked upon by the community and a talking point of the potential of what green energy sources can achieve for all communities.

# Job Quality

The BPU is well versed in job quality and labor requirements. The BPU is one of the few unionized water operations and has unionized employees throughout the organization from administrative staff to electric and water operations. The BPU also understands the requirements of the IRA and thus the mechanisms required to obtain the maximum value associated with the IRA. In addition to ensuring that we meet the labor requirements we also want to be good local partners for this project as well as for future projects. We also want to ensure not only are we using union partners and contractors but we are also providing training opportunities for those pursuing green occupations through local community college programs. In addition to providing those jobs during the development of the project we want to make sure this is a project that can provide ongoing training opportunities for those students of the future regarding maintenance and operations responsibilities on an ongoing fashion. This project is intended to be a living, breathing project that not only provides sustenance once but provides ongoing generational change for everyone involved for decades to come.

# Programmatic Capability and Past Performance

Assistance Agreements

The assistance agreements, both federally and non-federally funded, that the Kansas City Board of Public Utilities has overseen during the last three years are listed in the table below. We have achieved the goals set forth in each aid agreement and have stayed within the allocated budget.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Assistance Agreements | | | | | |
| Award ID/  Project | Award Date | Amount | Grant/Program  (CFDA) | * Reporting Requirements met? * Acceptable final technical reports? |
| ID: 96709901  Water Line Replacement Project | June 1, 2023 | $10.0M  100% Federal | 66.202 - Congressionally Mandated Projects | • All reporting requirements met to date.  • No final technical reports completed to date. |
| ID: 057906155  Electric Distribution Line Upgrade Project | August 16, 2022 | $2.0M Federal  $746.4K Local  73% Federal  27% Non-Federal | 11.307 - Economic Adjustment Assistance | • All reporting requirements met to date.  • No final technical reports completed to date. |
| LPDM-PJ-07-KS-2023-001  Back-Up Generator Project | Sept. 9, 2023 | $3.7M Federal  100% Federal | Emergency management performance grants | • All reporting requirements met to date.  • No final technical reports completed to date. |
|  |  |  |  |  |
| PA-07-KS-4640-PW-00134  FEMA Reimbursement Natural Disaster Grant | Nov. 23, 2022 | $647,356.68 | FEMA Disaster Grant | • All reporting requirements met to date.  • No final technical reports completed to date. |

Organizational experience

The Kansas City Board of Public Utilities has the necessary organizational skills and experience to accomplish projects on schedule. The Utility is in the process of completing two federal grants aimed at enhancing electric and water infrastructure. Over the course of four years, the project will repair about 15 miles of aging and undersized water lines in the Kansas City, Kansas Board of Public Utilities service area. BPU's old water infrastructure requires considerable modifications and replacement to assure the continuing delivery of safe potable water, enhanced flow characteristics, and compliance with all regulatory safety and resiliency standards. Another award is a FEMA Emergency Management Performance Grant, which will pay a backup generator to ensure redundancy and safe drinking water during power outages.

Staff expertise

We have many of the needed resources in-house to achieve the goals of the CRA project but will also obtain assistance and services of outside expertise.

William Johnson, the General Manager has vast knowledge of managing large projects and grants and bringing the community together toward a shared goal. He has more than 40 years’ experience within the organization.

Lori Austin is the Chief Financial Officer for the Kansas City Board of Public Utilities. As CFO for the Utility, she manages all financial activities within the organization and has more than 40 years’ experience within the organization.

Jeremy Ash is the Chief Operating Officer, in charge of Electric & Water operations.

1. **Past Performance**
2. **Reporting Requirements**
3. **Staff Expertise**

# Budget (Optional Budget Spreadsheet and up to 10 additional pages may be added if needed as an appendix to the Workplan)

1. **Budget Detail**

Budget Categories – Applicants may use the Optional Budget Spreadsheet

1. *Personnel*
2. *Fringe Benefits*
3. *Travel*
4. *Equipment*
5. *Supplies*
6. *Contractual*
7. *Other*
8. *Indirect Charges*
9. **Expenditure of Awarded Funds**
10. **Reasonableness of Costs**

The Low-Income Community Solar Project Alpha is expected to incur the following costs associated with the project. The BPU expects total personnel and fringe benefit costs for BPU staff to be approximately $361,900. There will also likely be some insignificant costs associated with customer service, public relations, information technology, etc. that are unaccounted for as part of the Low-Income Community Solar Project Alpha but it is believed the bulk of the work from a staff responsibility will be in the tracking of output and the value of that output such that the appropriate savings can be awarded to those low-income recipients.

No additional travel, equipment, or supplies are expected to be needed by internal staff to manage the information or power associated with the Low-Income Community Solar Project Alpha.

It is currently expected that the 5MW AC project will cost approximately $10,125,000 to build and construct under the provisions set forth under the Davis Bacon Prevailing Wage requirements and the Build America, Buy America program where as the project would expect to receive funding of 30% through the metrics associated with the Inflation Reduction Act Investment Tax Credit.

The project will also require on-going maintenance requirements, insurance, etc. and it is currently expected to cost approximately $427,000 over the first 5 years.

The goal of both the build and development stage as well as the maintenance stage is to utilize talent through local community college programs to ensure the growth of the industry locally while providing a real-life classroom for workforce development.

No other material costs are expected. The idea behind the program and project is to showcase the ability for low-income urban communities to both improve air quality in the disadvantaged communities but to do so in a way that reduces the energy burden associated with households in those communities. This project is scalable and thus by proving Low-Income Community Solar Project Alpha is not only doable but replicable, the BPU and others can use the model as a mechanism to expand localized solar projects and hopefully means that Project Beta and more can follow in the footsteps.

The expenditure of the awarded funds is expected to be a relatively simple process. The number of development firms and the local talent pool are expected to make getting bids and the bid process relatively straightforward and should yield positive results both financially but also in terms of moving the project forward at a robust pace.

The reasonableness of costs is based on numerous proposals on other projects within the state. Costs may be marginally higher or lower depending on the various soft and hard costs associated with the project but are expected to be reasonably close at the time of application. Solar projects are highly scalable and thus the project size can be modified slightly to ensure the best use of the award and funds available.