County of Lancaster
Request for ARPA Funding

Organization RegenAll **Date** 30 June, 2022

Submitted By Franklin Egan **Authorized Signature** 

Email Address: [redacted] **Phone #** [redacted]

Please attach any supporting documentation for consideration. Submission should be in PDF Format.

Project/Item Description	With energy costs rapidly rising, Lancaster County households urgently need to update their energy infrastructure. Fortunately, cost effective technologies are available to transition households from expensive fossil fuels onto affordable, resilient renewable energy systems. High-efficiency electric heat pumps and residential solar power systems are two of the most effective technologies households can use to address their energy challenges. Electric air-source heat pumps are a much more energy and cost-effective way to heat and cool homes in our climate, as compared to oil heat or natural gas. Solar panels can help to provide resiliency to our energy grid with distributed energy generation. Both sets of technologies provide substantial net savings over 5-to-15-year return periods, but many low to moderate income households are unable to provide the initial capital to modernize their household energy infrastructure. Our proposal would provide this jump start in capital by coupling ARPA funds with owner equity, commercial lending, and community fundraising. We will use funds to help up to 500 low to moderate income households install heat pumps and/or solar panels and realize substantial net savings in their monthly energy bills. We estimate that our projects will save households up to $3,000 per year in energy costs, while also stimulating $7.5M in local economic activity to contractors and installers. By helping up to 500 homes transition to clean energy, RegenAll would achieve the “success stories” needed to establish our Community Climate Fund. The Fund is an innovative clean energy financing approach, where RegenAll raises funds from local (more affluent) households and businesses by selling them “carbon offsets” proportional to their annual greenhouse gas emissions. The funds are then invested into local projects (like heat pumps and solar panels) that generate real pollution reductions and energy savings in the community. RegenAll is already building a network of Lancaster businesses and households interested in purchasing carbon offsets and supporting our Community Climate Fund. This ARPA grant from Lancaster County will help us grow momentum and ensure sustained contributions to our Fund from the Community for many years into the future.

Estimated Cost – how cost was derived & provision of partner funds (who is providing, how much and show commitments).

Total community fund requests are **$4,000,000**.

We plan to help install high efficiency heat pumps on 250 homes and solar panels on 250 homes. On average, we estimate that each heat pump project will cost $20,000, with 40% supplied from ARPA funds and 59% coming from owner equity or commercial financing provided by BlocPower and other lending partners. For solar panel projects, we estimate that each project will cost $40,000, with 20% from ARPA funds, 22% from federal tax credits, and 57% coming from owner equity or commercial loans from the Clean Energy Credit Union and other lending partners.

For both project types, we anticipate providing 1% of project costs through RegenAll's Community Climate Fund. Although 1% is proportionally a small amount, it represents $150,000 raised from Lancaster households and businesses in just the second year of the Fund's development. Fully developed, we project that our Fund will raise $1.7M for climate projects from 2,000 households and 50 businesses each year.

The following table provides a summary of project costs:

	Project Type			
	Heat Pumps	**Solar Power**		**Total**
Number of Households	250	250		
Per Project Costs				
ARPA Request	$8,000	$8,000		
Tax Credit	$0	$8,800		
Owner Equity or Commerical Lending	$11,800	$22,800		
RegenAll Community Climate Fund	$200	$400		
Project Total	$20,000	$40,000		
Totals				
Total ARPA Request	$2,000,000	$2,000,000		$4,000,000
Total Project Costs	$5,000,000	$10,000,000		$15,000,000

Project costs were developed using models from the National Renewable Energy Laboratory and discussions with project partners including BlocPower.

We will also administer this project using operating funds supplied through a grant awarded in February 2022 from the S. Dale High Leadership Center and the High Foundation.

Which County ARPA Community-wide Benefit(s) does the project meet?

4. Technology Modernization and 7. Affordable Housing

Briefly explain how the project meets the County's guidelines.	Our project will take major steps to modernize Lancaster County's housing and energy infrastructure. A one-time allocation in funding from the County will result in substantial improvements in energy savings to low- and moderate-income households, resulting in an estimated additional $13.5M in household discretionary spending in the local community over the next ~30 years. Installation of the project will be contracted only to local firms, resulting in an additional $7.5M in wages to skilled tradespeople. The project will also jump start the development of RegenAll's Community Climate Fund. The Fund will raise money by selling "carbon offsets" to local businesses and households, and then using that money to support projects in Lancaster County that help residents and businesses substantially cut greenhouse gas emissions. Once fully developed, we estimate that the Fund will raise $1.7M annually for local projects, cutting greenhouse gas emissions by an additional 116,000 tons each year. This project is a one-time request for funding that will jumpstart a self-sustaining funding model to modernize the County's housing and energy infrastructure while helping to mitigate the extreme weather that climate change is bringing to our region. Climate change is already increasing the frequency of extreme rainfall in Pennsylvania, so our project also contributes to the ARPA priorities for water infrastructure. We are bringing significant matching resources to amplify the ARPA investment. County funds will be coupled with homeowner equity and commercial lending, along with money raised through the sale of local carbon offsets. We are not requesting any indirect or administrative funds; our project management staff will be supported through a grant from the High Foundation.
Why should this project be a priority and how will it help the County? Also, if this application is for more than one project, please identify each one, provide information and rank them in order of your priority.	We estimate that the county currently spends more than $2 billion dollars annually on fossil fuels. Because Lancaster County has no fossil fuel industry internally, almost all of this money leaves the community. As heating oil, natural gas, and gasoline costs continue to rise, this flow of money out of the community disproportionately affects lower income households. Heat pumps and solar panels can provide substantial lifetime energy savings, which frees up money to circulate in local businesses and

	multiplies local economic development. Installation of these technologies is labor intensive, which creates job opportunities for skilled tradespeople and business opportunities for local contractors. These technologies will also help Lancaster County cut greenhouse gas pollution and transition to a renewable energy economy. Climate change is already affecting our region, with increasing heat waves, heavy rainfall events, and natural disasters. Household energy infrastructure improvements will make households more resilient to power failures and help Lancaster mitigate its contributions to global climate change. The proposal includes 2 project types: heat pump installation (250 households) and solar panel installation (250 households). Because some buildings may be an ideal candidate for one project but not the other, we would prefer to reduce the number of recipients for both project types if necessary, rather than cut one project type entirely.
Will this project require ongoing expense (maintenance, updates) or frequent replacement? Are expenses already being incurred, if so, can they be reduced through this project?	While heat pumps and solar panels do require some routine annual maintenance, these costs will be assumed by the homeowner, and there will be no expectation for county funds to cover ongoing maintenance. Households already pay thousands of dollars in energy costs each year, with fossil fuel costs rapidly rising. These technologies will significantly reduce household energy costs already being borne by low- and moderate-income households. We estimate that heat pumps can save homeowners $1,800 per year in energy costs while solar panels can save $1,600. We estimate that our proposal could save Lancaster households a total of $13.5M in energy costs over the next ~30 years. These savings require initial capital to finance installations, and ARPA funds will help make project costs affordable for low to moderate income households. This project will also jumpstart the development of our Community Climate Fund, which is a local carbon offset registry and renewable energy funding resource. Once fully developed, we estimate that the Fund will raise $1.7M annually for heat pumps, solar panels, and other projects in Lancaster County.
Project Timeline – start to finish, and when funding will be needed.	We plan to begin soliciting applications from homeowners and landlords in late summer 2022. We will be working with Lancaster-Lebanon Habitat for Humanity and other outreach partners to solicit applications from urban, rural, and suburban households across the County. We plan to accept applications on a rolling basis, and award implementation grants through a committee review process meeting every quarter. We have attached a

	copy of our oversight committee charter, which outlines our process for vetting applicants, implementing projects, and monitoring outcomes. We plan to award 50-100 project awards each quarter through Dec. 2023, with 50% of money awarded at the start of each household installation, and 50% awarded upon completion. We anticipate each household installation will take 1-3 months from receipt of award until completion. Both project types can be installed during all times of the year in Lancaster County, with some potential delays for solar in especially inclement weather.
Are there other organizations a part of this project? If yes, please list them and their role, including funding. If not, explain why?	RegenAll has developed important relationships with local and national organizations to support this work. BlocPower is a national leader in clean energy technology and will provide low-cost financing and technical support for our heat pump projects. Clean Energy Credit Union is a federal credit union that specializes in financing "green" home improvement and will serve as a financing partner for our solar energy projects. We plan to work with local solar and HVAC (heating, ventilation, and air conditioning) contractors to install projects at a high level of cost-efficiency and quality. We plan to help homeowners assess multiple quotes for each project, but we also have developed relationships with reputable, trusted providers. One local firm, Paradise Energy Solutions, is prepared to work with us on residential solar projects. In February, RegenAll received a $75,000 grant from the High Foundation to support the development of our Community Climate Fund. This grant will be used as matching funds to support administrative staff for this project. All partner organizations have provided letters of support appended to this application, and the High Foundation can provide a letter of support upon request.