

# Comments in Response to the RFI on Energy Improvements in Rural or Remote Areas Program

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This response to DE-FOA-0002841\_RFI is being submitted by the Center for Sustainable Business (CSB) in collaboration with thought leaders from the University of Pittsburgh, the Wilton E. Scott Institute for Energy Innovation at Carnegie Mellon University (CMU), the Ohio River Valley Institute, the Steel Valley Authority, the Heartland Capital Strategies, the ReImagine Appalachia Coalition, IN-2-Market Inc., Resilient Cities Catalyst and the Rocky Mountain Institute (RMI). We would like to thank the U.S. Department of Energy (DOE) Office of Clean Energy Demonstrations (OCED) for the opportunity to respond to DE-FOA-0002841\_RFI.

## **Category 3: Program Structure**

### ***3.1 Are there best practices OCED should consider for engaging with rural or remote stakeholders?***

There are a number of best practices that are important to take note of when engaging remote and rural stakeholders.

1. Many rural communities have part-time mayors and volunteer city councils with additional jobs. They may lack the capacity to reimagine themselves in the new energy economy, identify all the available options to them and their communities, conduct greenhouse gas analyses, create climate action and community benefit plans, build out community-labor training options, sort out best practices and models for replication, create diverse stakeholder groups for widespread community input into project development, and secure matching resources needed for federal infrastructure funds.

All the necessary work needed to visualize community development, create the blueprint to get there, and apply resources and capacity needed to implement the plan can be overwhelming. Ongoing support for technical assistance will be needed, including support for:

- A network of researchers and experts offering technical assistance and access to best practices;
  - Grant writers;
  - Peer networking opportunities to share experiences and best practices;
  - Identifying and implementing joint purchasing and application opportunities;
  - Templates for proposals, requests for proposals, power purchasing agreements;
  - Community visioning, climate action planning, development of community benefit plans and agreements;
  - Access to diverse stakeholder groups for community input; and,
  - Building regional community-labor training partnerships.
2. Rural communities are already established populations with their own economy, thought leaders, and way of life. When engaging with rural and remote communities, it is essential to work with established and trusted groups and networks in the region to ensure projects are successful.

It is vital to utilize existing networks such as local leaders, industry leaders (e.g., wind, solar, natural gas, coal, manufacturing, etc.), community-based organizations, coalitions and trusted partners already well established in the region. These networks are generally intertwined with smaller communities and the closest urban center which allows them to serve as intermediaries between OCED, the projects and the community. Network partners may then be able to introduce, promote, and, in some cases, help execute the program.

Network leaders may not represent every member of the community equally, and there is work to be done to ensure every voice is heard. The diversity of ideas will allow projects and partners to achieve economic and social development.

Once the ERA program is established, it is important to clearly explain program objectives and the selection criteria for funding and support. Remote and rural communities do not have the resources, time, or funding to fully understand details that go into each project. OCED can reduce the barriers to entry for rural and remote communities by providing clear and concise information regarding the program and its funding solicitations.

The relationship between rural and remote communities and OCED should not be compared to the relationship between a subject and a researcher. Communities need to actively participate in helping to identify solutions. They don't need to be "told" what to do, but rural communities can often benefit from respectful sharing of ideas, as the scope of information available to them may be limited. Based on our experience, this is a common issue faced by academic centers focused on rural and remote communities. Communities are left feeling "experimented upon" with no real value added to the region and its economy. Furthermore, it may lead to difficulty in engaging in the future.

### ***3.2 Are there partners OCED should work with to engage with rural or remote areas in support of stakeholder engagement?***

The ReImagine Appalachia Coalition represents hundreds of key stakeholders—local government officials, organized labor leaders, racial justice groups, faith representatives and environmental advocates, among others—that came together to find common ground and create a collective vision for shared prosperity in a 21st century sustainable Appalachia. They also created a blueprint for how to reach that goal. In the process, they earned significant trust in the region across several key stakeholder groups that will be critical to the successful implementation of federal climate infrastructure funds in the region.

The Centralia Coal Transition Grant Program is a prime example of the way organizations can assist in promoting, implementing, and administering broadscale programs. These may include:

- Community Action Agencies
- Community-Based Organizations
- Environmental Justice Organizations

- Local non-profits focused on remote and rural communities
- Utility Energy Efficiency programs
- Local government leaders and departments
- Educational institutions/school boards
- Local media outlets
- Councils of Government
- Regional Planning Organizations

Other partners that OCED might consider working with in the Appalachian region include:

- [The City of Pittsburgh](#)
- [The Enel Foundation](#)
- [The Steel Valley Authority](#)
- [Heartland Capital Strategies](#)
- [SMART Columbus](#)
- [Sustainable Columbus](#)
- The University of Pittsburgh, [Center for Sustainable Business](#)
- Carnegie Mellon University, [The Wilton E. Scott Institute for Energy Innovation](#)
- The [Congress of Neighboring Communities](#) (CONNECT)
- [Relmage Appalachia](#)
- [Coalfield Development](#)
- [Southern Ohio Diversification Initiative](#) (SODI)
- [Tristate Energy and Advanced Manufacturing](#) (TEAM) Consortium
- [WVU Energy Institute](#)
- [Partner Community Capital](#)
- [JobsOhio](#)
- [Mayor's Partnership for Progress](#)
- [The Center for Shared Prosperity](#)

***3.3 Are there any communities or entities that would struggle to or lack capacity to participate in the program, and how should OCED consider any additional resources to help these communities?***

Remote and rural communities, often, do not have the capacity to dedicate resources to participate in the program. Universities and organizations can offer resources to bridge the divide from engagement. OCED should develop a platform to facilitate connections between communities, project developers, academic institutions, charitable organizations, and financiers.

We recommend that OCED consider aggregating smaller projects in remote and rural communities into a single large project, working across communities and stakeholder groups via networking and consortium building. Many rural municipalities do not have the capacity to plan and engineer capital intensive project. This approach reduces the need for every small community fend for themselves and encourages support via a network of trusted partners and peers. The overall risk of the portfolio of projects is minimized and projects with low ROI are offset by projects with higher ROI. Another benefit to this approach is that it decreases the amount of administrative work required by applicants.

***3.4 Are there any considerations OCED should consider in the design of the program to incorporate challenges for communities not ready for a demonstration program? Are there partners who can help work alongside these communities?***

Community network partners have the resources to support remote and rural communities. An example of a network partner that may work alongside remote and rural communities is the Marshall Plan for Middle America coalition which partners with cities and organizations in Ohio, Kentucky, Pennsylvania, and West Virginia to establish and coordinate projects. Established community network partners can aggregate projects on behalf of remote and rural communities.

There are communities in rural areas that still lack dependable broadband access, thereby limiting residents and companies from fully participating in the economy. We recommend that OCED coordinate and align with other funding programs that are attempting to remedy that situation to ensure that investments are leveraged and impactful.

***3.8 How can OCED design the ERA Program to unlock other, non-Federal sources of capital for rural and remote energy projects?***

One way of unlocking non-federal funding is modeling after the [Sustainable Finance Hub](#) to match pipelines of local projects and capital from private investors. Private investments, like pension funds, establish a connection with previously embedded community organizations.

Urban-rural partnerships can play a role here. Urban communities may have greater capacity to provide projects with both staffing and financial support and access to private development opportunities.

To unlock non-federal funding, OCED should allow state funding in cost sharing arrangements. Oftentimes, the policy of federal and state funding not allowing applicants to receive matching funds from other federal and state agencies becomes a barrier for communities that rely on federal and state funding. An exception should be considered for remote and rural community applicants.

A great example of non-federal funding in action is the rural Centralia Micropolitan Statistical Area in Washington state. The Centralia program successfully unlocked private investment at a rate higher than the program's original investment. However, the private investment unlocked in Centralia did not come from investors or financial institutions. It came mostly from homeowners and business owners who received small grants that partially covered the cost of energy efficiency upgrades, such as \$3,000 toward the purchase of a \$10,000 high efficiency electric heat pump. In relative terms, \$3,000 may not seem like a large investment, but in this case, it covers 30% of the project costs. The grant is sufficient to change the ROI characteristics for the home/building owner in such a way that encourages investment in an upgrade that may have been previously financially unwise. The Lawrence Berkeley National Laboratory (LBNL) has studied and quantified this phenomenon in many states including Pennsylvania. In short, in programs such as Centralia's consumer capital is as important or more important than investor-based or institutional capital.

It may be useful to compare costs to "existing alternatives". In many cases, service to these communities is a "duty to serve" rather than economically advantageous to an investing company. Incentivizing electric utility companies to participate is important in remote and rural areas as it drives corporate engagement.

### ***3.11 What are some of the broad challenges to accessing cost share that could be realized through this provision?***

One of the main challenges in accessing cost share is that it may not come in the form of capital contributions but in the form of in-kind contributions. In-kind contributions can be in the form of human capital, warehouse space and other non-monetary contributions. Therefore, we recommend that OCED allow in-kind contributions as an eligible cost sharing option for remote and rural community project submissions.

The energy transition for remote and rural communities will require major capital investments. Sources of cost share and the amount of cost shares are a small portion of the capital investment that will be required. OCED should assure that the long-term cost share requirements are known and are clearly understood by the affected communities.

***3.12 Are there any key considerations OCED should keep in mind while shaping prize competitions?***

It is CSB's position that prize competitions should include science-based research to demonstrate that they are just, equitable and positively benefit rural communities. In addition to surveying CSB stakeholders for feedback, a broad literature search was conducted using various databases searching the keywords "prize competition" and "rural communities" to better understand the effectiveness of prize competitions as an effective funding mechanism for rural communities. The results were then sorted by relevance. Surprisingly, there was only one meta-analysis study conducted by Nørgaard and Thuesen in 2021 that addresses prize competitions in rural communities.

Based on our literature review and feedback, prize competitions are not the best funding mechanism for rural communities because they do not address the barriers to entry and the risk-to-reward is not favorable. The research by Nørgaard and Thuesen found that prize competitions specifically targeting rural communities support rural areas with already strong communities.<sup>1</sup> However, weak communities may require additional support such as professional development or additional time to develop a competitive application.

Our experience is that local governments tend to view prize competitions as a "novelty" because the prize money often does not reflect the effort to develop the project. Prize competitions are often narrowly focused and do not align with the priorities of remote and rural communities. Nørgaard and Thuesen's research supports our experience that the prize competitions disincentivize participation by requiring specific criterion, such as job creation or population increase, set by the governmental bodies that may not be relevant to rural areas. Individuals interviewed in the research literature commented that there was no cooperation between communities due to the competitive nature of the

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<sup>1</sup> See Nørgaard et al. (2021), Rural community development through competitions, prizes, and campaigns: The villagers' perspective. *Journal of Rural Studies*, 87, 465–473. <https://doi.org/10.1016/j.jrurstud.2020.03.006>

process. Individuals were more likely to support their own communities rather than partner or share the prize with neighboring communities.<sup>2</sup>

As mentioned earlier, the lack of available research demonstrates a gap in the literature regarding the effectiveness of prize competitions for rural communities. Further research is required to understand how prize competitions are experienced by rural communities before implementation. Therefore, we recommend prize competitions should not be used as a funding mechanism in the ERA program.

### ***3.13 Are there areas that you believe would be well suited for a prize competition?***

Overwhelmingly, our stakeholders and partners have identified Funding Opportunity Announcements (FOAs) as the primary vehicle to seek financial assistance from the Federal Government. Only a few have flagged the use of prize competitions as a funding mechanism for projects. Congress' own CRS report has stated that, "despite an increase in the use of federal prize competitions, there is limited information on their effectiveness and impact in spurring innovation and providing other potential benefits to the federal government".<sup>3</sup>

If OCED seeks to implement the use of prize competitions as a viable funding mechanism for ERA funded projects, there are steps we recommend OCED take steps to better prepare, support, and empower participation of new applicants, communities, and organizations to participate.

Southwestern PA and the surrounding area are well suited for prize competitions. This was the birthplace of the energy industry in the U.S., as the enormous fuel needs of Andrew Carnegie's steel mills drove the incredible pace at which the energy industry grew and flourished here. It has one of the most complex systems of local government in the U.S. resulting from decades of fragmentation. Theoretically, if real energy solutions can be implemented here, the same solutions can be implemented anywhere.

We would like to highlight existing prize competitions that address social and climate issues that serve as great examples.

- The U.S. Department of Energy (DOE) and the National Renewable Energy Laboratory (NREL)'s Inclusive Energy Innovation Prize, highlighting the Biden-

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<sup>2</sup> See Nørgaard et al. (2021), Rural community development through competitions, prizes, and campaigns: The villagers' perspective. *Journal of Rural Studies*, 87, 465–473.  
<https://doi.org/10.1016/j.jrurstud.2020.03.006>

<sup>3</sup> See Gallo, M. E. (2020). Federal prize competitions. Congressional Research Service, Washington, DC.



Harris Administration’s Justice40 initiative to have 40% of federal climate investments benefit disadvantaged communities and achieve net-zero emissions economy-wide by 2050.

- CMU’s, “Smart Mobility Challenge,” co-sponsored by Mobility21 and CMU’s Traffic21 initiatives. In this competition, southwestern PA municipalities — often rural ones — and public transit operators suggest real-world mobility challenges that their communities face. The University then awards research funding to researchers to work with communities to solve those problems and implement solutions.
- Finally, we recommend that OCED take into consideration [the global Climathon approach](#), a platform for citizens and decision-makers to work together to create a better future. For instance, the University of Pittsburgh Center for Sustainable Business alongside the Congress of Neighboring Communities (CONNECT) hosted the Pittsburgh Climate Hackathon in 2022. The hackathon event was model after the global Climathon approach where the onus is on the entities with the capacity (Universities and their Students/Faculty) to drive participation in the funding for prizes and ideation, all of which is for the local rural and remote communities’ benefit.

Prize competitions should be designed in an inclusive manner so that remote and rural community individuals are empowered to participate and be rewarded for their effort. This includes proactively providing support for proposals, applications, and guidance throughout the competition. Prize competitions should continue to reach out to communities that are not well represented and provide the competition in multiple formats and languages. Our members have noted that there is a common morale issue with only one winner and many “losers.” Prize competitions should include a mechanism for supporting good ideas that did not win. OCED should consider implementing intermediary prizes (e.g., partial prize awards to participants that achieve certain milestones). All participants, regardless of winning, should be assured to receive support or some ROI that matches their level of effort.

***3.14 DOE intends to release multiple competitive solicitations over the duration of the ERA Program. Are there specific timing considerations of which DOE should be aware in releasing solicitations? For example, amount of time respondents need, timing within the calendar year, or reoccurrence during FY22-FY26?***

The current amount of time allotted for FOA solicitation responses pose challenges for rural communities. Our members have noted that FOA applications require a large time commitment that many small organizations cannot spare. FOA solicitations should take

into consideration the time to convene stakeholders, discuss project design and expectations. The short turnaround times to respond to the FOA immediately exclude remote, rural, tribal, and marginalized communities, which often require stakeholder or community consensus (e.g., tribal council resolution) before submitting a grant response.

Additionally, many of our stakeholders also felt that spending such time presented too much risk, considering the low probability of receiving an award or low ROI. The effort to recruit stakeholders, partners and collaborators is challenging and time consuming. Our stakeholders have noted that rural or remote communities may not have access to quality partners and collaborators. Rural community organizations may have difficulty deciphering which potential partners would strengthen their application or just use them for their own personal gain.

Another limitation regarding the amount of time respondents have to respond to a solicitation is that the aforementioned communities struggle to form partnerships with trustworthy partners to cover cost sharing requirements. Forming these partnerships takes time and connections that these communities may not have access to. Many of our subject matter experts and stakeholders with experience in submitting FOA applications have also noted that the scope of funding opportunities is often too narrow and too specific. If a short duration constraint is placed on potential applicants, this may introduce challenges to applicants who may find it difficult to predict topics and develop an appropriate response.

In our experience, potential applicants may not even be unaware of such funding opportunities in the first place. A longer time duration for the application process ensures that rural, remote, tribal, and marginalized communities have the opportunity to become aware and familiar with the solicitation. With this in mind, it is recommended that OCED increase the overall submittal time to 2-3 months and stick to relatively broad scopes and repeated topics to ensure applicants are able to submit competitive applications.

Finally, OCED should avoid releasing competitive solicitations around major religious holidays and around the beginning or end of fiscal budget cycles, since many stakeholders may be unavailable around these timeframes.

Owing all of these other barriers, an initial set of awards to build capacity is crucial. It will take significant time to build the capacity, align the partners, and develop a technical scope at the current state of the region.

**3.15 OCED is considering the role of project partners to aggregate projects and work with projects as a cohort or in a region. Are there examples of key organizations that can serve as aggregators for projects? What are their key attributions?**

There are key organizations that would be able to aggregate a great number of projects within different areas of the scope. These areas would include finance, human capital, local government organization, and geographical representations.

- Within Appalachia, [the Sustainable Finance Hub](#) has been working to establish connections with local movements and private financing networks to help aggregate and distribute funding between each sector.
- The [Center for Sustainable Business](#) has been aggregating leads with larger companies to help fund projects, research, and human capital within the Appalachian region.
- ReImagine Appalachia and [the Marshall Plan for Middle America coalition](#) has been working to collect and aggregate human capital within the region.
- [CONNECT](#) – This organization has 15 years of experience organizing 30+ local governments around shared public policy issues, including clean energy, sustainability pilot projects.
- [Centre Region COG](#) is a council of government organizing 7 local governments around regional needs and programs.
- [Delaware Valley Planning Commission](#) is a regional planning commission supporting dozens of local governments and convenes a wide array of partners to inform and facilitate data-driven decision-making.
- [RiverWise](#) is a non-profit organization creating regional identity around rivers of Beaver County, which includes cohort/multi-municipal clean energy visions.
- [IN-2-Market](#) is an innovation-support nonprofit with a tristate service area (OH-PA-WV), that just concluded successful pilot projects developing and demonstrating tools to help small and medium-sized manufacturers understand their carbon footprint, put plans in place to mitigate it, and connect with financing to modernize/decarbonize. IN-2-Market has a specific focus on social and environmental justice issues and recently established an alliance of major private sector energy-related companies called the Appalachian Energy Future.
- The [TEAM Consortium](#) is a tristate (OH-PA-WV) public-private partnership that is nationally recognized as a best practice collaborative (by ARC, DOE, others). TEAM aligns energy and manufacturing sector needs for skilled labor

and provides updated curriculum and easy on-line access to quick skill-building, certifications, and degrees.

### ***3.16 What are the key criteria OCED should consider, given the available \$200M per year for the next five years for the provision?***

To ensure OCED is developing and implementing an equitable clean energy transition, OCED must tear down the structural and system barriers preventing those most impacted by climate change from receiving the support they need to develop solutions for their communities. Our stakeholders have noted that solicitation requests may be difficult to understand, and eligibility and selection criteria may be unclear. This causes respondents to hesitate or prevent them all together from submitting an application. This also extends the time required to develop a competitive application, a resource remote and rural communities cannot afford.

OCED should create an inclusive and just innovation ecosystem in climate and energy technologies by supporting underrepresented groups and organizations through the solicitation process. A recent study by the Tishman Environment and Design Center found that out of approximately one billion dollars in philanthropic funding provided to a dozen national environmental grantees, just over 1% of the funding was awarded to energy justice-focused organizations and 99% of the funding benefiting mainstream environmental organizations.<sup>4</sup>

Funding opportunities should follow a set of criteria to ensure an equitable clean energy transition. Below is a list of recommended criteria OCED should consider when evaluating applications:

- Projects and applications submitted by first-time and less-resourced applicants
- Projects that support, build trust, and strengthen relationships and partnerships with underrepresented, underserved communities
- Projects that mobilize sustainable capital to revitalize remote and rural communities (Sustainable Finance Hub)
- Projects that foster responsible city, state, and public-private procurement partnerships (Sustainable Finance Hub)
- Projects that ensure that blue collar, low-income, and marginal workers have a better chance of a living wage and meaningful jobs (Sustainable Finance Hub)

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<sup>4</sup> See Tishman Environment and Design Center. (2020). Environmental Justice And Philanthropy: Challenges and Opportunities for Alignment.

- Projects that enable clean energy and climate research at colleges and universities that serve large populations of students underrepresented in STEM, Minority Serving Institutions (MSIs), Historically Black Colleges and Universities (HBCUs), and community colleges
- Projects that include non-profit and non-governmental organizations; state, local, and tribal governments and government entities
- Projects that support Minority or Women-owned Businesses to help increase diversity in clean energy C-suite leadership
- Projects that support and align with DOE's Justice40 goals
- Projects that ensure access to capital for rural small and medium-sized manufacturers (who make up 85% of manufacturers) who need capital to modernize and decarbonize their operations
- Projects that ensure fair access to education and training to upskill and reskill rural residents for new technologies (including ability to access online classes and training)
- Projects that assess matches or gaps in needed skill sets and map out the transferable skills rural residents already possess, to ensure that new technologies can be adopted and sustained in rural settings

This recommendation criteria list ensures OCED removes criteria that may inadvertently exclude disadvantaged groups and provide OCED with alternative criteria or solutions.

### ***3.20 Are there other key areas not listed above that should be considered for technical assistance needs for project and project developers?***

There are three additional key areas not mentioned that should be considered for technical assistance needs for project and project developers.

First, technical assistance is needed during the project financing phase of project development. This includes matching projects to funders and analyzing funding terms. Second, OCED should consider reviewing proposals that have the potential to achieve community or economy-wide impact. Third, OCED should concentrate funding opportunities by geography to enhance the impact of projects in the area and the economy.

Below, we have outlined seven economic multipliers to review:

- Projects that focus on labor-intensive industries
- Projects that partner with local service providers

- Potential for triggering supplemental private investment
- Annuity benefits that continue after funding ceases
- Presence of community partners that can be leveraged to implement and administer
- Target “shovel ready” and “launch-ready” projects
- Projects that provide improvements in quality of life

### ***3.21 Are there key organizations that should be considered to provide technical assistance, in addition to the Centers supported through EPA and the national laboratories?***

DOE can greatly expand its impact and reach by partnering with trusted organizations and supporting a broader innovation and deployment ecosystem. The organizations we have identified below focus on areas that impact rural and remote communities.

#### **The Center for Sustainable Business (CSB)**

The Center, established in the Joseph M. Katz Graduate School of Business and College of Business Administration at the University of Pittsburgh, has been working since 2019 to help students and companies learn how to leverage investments in sustainability. CSB aims to promote the adoption of more sustainable business practices. Through innovative research, specialized education and training, and critical thought leadership, CSB helps companies learn how to leverage their investments in sustainability across all functions of the organization to generate better business and societal outcomes. The Center works with a diverse group of global and regional companies who are committed to investing in research and education on best practices and innovation in the field of sustainable business strategy. In 2020, CSB published the [Marshall Plan for Middle America](#) (MP4MA) Roadmap, which aims to build a regional, multi-sectoral coalition of stakeholders to drive investment in infrastructure and energy diversification that will catalyze more equitable economic recovery while laying a foundation for the Ohio Valley (including Upper Appalachia) to be a global leader in cleaner energy resources and circular economy practices. MP4MA seeks to provide a platform and a common regional voice to the Appalachian region. The region is seeing a crisis of aging infrastructure, obsolescence of business and government institutions, and the need for upskilling and reskilling of its workforce. The MP4MA has the potential to catalyze economic transformation across the region, but it requires visualizing the steps that need to be taken and the pieces that need to be put into place first. To learn more, please visit their website [here](#).

#### **The Pittsburgh Region Clean Cities (PRCC)**

The Pittsburgh Region Clean Cities, a 501(c)(3) non-profit organization, serves as the designated regional organization for all U.S. Department of Energy (DOE) Clean Cities initiatives, including project funding. PRCC's mission advances the energy, economic and environmental security of the United States by supporting local actions to reduce petroleum use in transportation. PRCC builds and supports the infrastructure needed for a strong alternative fuel and alternative vehicle market in Western Pennsylvania. PRCC serves the needs of its member organizations through education, business consulting, development of grants, grant writing, and management of Federal and State-funded projects. PRCC's stakeholders have saved more than 50 million gallons of petroleum since the program's inception in 1993. PRCC's efforts have helped deploy thousands of alternative fuel vehicles and the fueling stations needed to serve them, aided in the elimination of millions of hours of vehicle idling, and helped accelerate the entry of electric-drive vehicles into the marketplace. The national network of U.S. DOE Clean Cities coalitions is helping to ensure our nation's energy and economic security. Coalitions create significant and lasting change by building partnerships from coast to coast to advance affordable, domestic transportation fuels and technologies. Their efforts have yielded impressive results since the first Clean Cities coalition was established in 1993. To learn more, please visit their website [here](#).

### **The Institutes of Energy and the Environment (IEE) at Penn State University**

IEE connects and supports interdisciplinary teams of researchers to solve some of the world's most difficult energy and environmental challenges. The Institute brings together more than 500 extraordinary faculty, staff, and students to advance research and innovation by collaborating across disciplines. Major initiatives at IEE include but are not limited to climate variability and change, ecosystem productivity and biodiversity, stressors and resilience, food and water security, and polar science. Penn State researchers along with the Bioeconomy Institute at Iowa State are managing the [\\$10 million C-CHANGE grant](#), funded by the U.S. Department of Agriculture's National Institute for Food and Agriculture. In addition to the Bioeconomy Institute at Iowa State, other institutions involved with the new C-CHANGE grant include Roeslein Alternative Energy, FDCE of New Albany, Ohio; the USDA Agricultural Research Service National Laboratory for Agriculture and the Environment in Ames, and 33 partner organizations. To learn more, please visit their website [here](#).

### **The PA Solar Center**

The Pennsylvania Solar Center is a 501(c)(3) non-profit organization. The mission of the PA Solar Center is to maximize the number of people, organizations, and businesses who benefit from solar energy in Pennsylvania by providing unbiased assistance and education. The PA Solar Center is supported by generous funding from The Hillman

Foundation, the Heinz Endowments, business sponsors and donations. In 2021, the PA Solar Center launched the Galvanizing Energy Transition (G.E.T.) Solar Communities program. The G.E.T. Solar program helps property owners through the entire solar procurement process, using streamlined, simple steps. The PA Solar Center, through the G.E.T. Solar program has assisted nearly 50 businesses and organizations through the process to date. Some of the completed projects include Global Links in Pittsburgh, Community College of Allegheny County, Western Pennsylvania Conservancy's Fallingwater and Utz properties with several projects in the contracting process. To learn more, please visit their website [here](#).

### **The Solar United Neighbors (SUN)**

Solar United Neighbors (SUN) is a national 501(c)3 nonprofit. SUN represents the needs and interests of solar owners and supporters across the country. SUN was founded in Washington, D.C., in 2007 as a neighborhood group of economically and racially diverse activists seeking a solution to help people pay their electric bills and stay in their homes. In 2007, SUN launched its first solar co-op to leverage bulk-purchasing power to get discounted pricing and quality installations. SUN found that co-ops were a highly effective, replicable, and scalable model for solar adoption. Co-ops delivered impressive benefits for individuals, communities, and a just, clean energy transition. In 2016, SUN added programs in Ohio and Florida, and in 2017 added programs in Minnesota, Pennsylvania, and New Jersey. SUN's solar co-op program surpassed its 3,500th installation in 2018. The organization also expanded solar co-ops to include electric vehicle charging and battery storage. To learn more, please visit their website [here](#).

### **WaterNow Alliance**

WaterNow Alliance is a network of local water leaders advancing sustainable, affordable, equitable, and climate resilient water strategies in their communities. WaterNow was founded in 2014 by Cynthia Koehler, Audrey Finci and Kathleen Moazed. As an elected board member of her local water district and longtime water policy expert in California, Cynthia identified the need for an organization that connected local leaders interested in sustainable water solutions and provided support to accelerate their adoption. Pooling their collective backgrounds in policy, business, law and government, Audrey, Kathleen and Cynthia envisioned a dynamic new model to catalyze change and implement sustainable water solutions at the community level. WaterNow Alliance was formed with the support of partners including the National League of Cities and Walton Family Foundation. The WaterNow Alliance also launched the Project Accelerator, an initiative that helps advance programs and projects that provide real water-saving benefits for communities. The Accelerator offers 250 hours of



pro-bono technical assistance to water resource agencies to support innovative, sustainable and equitable water management projects. The Accelerator is open to cities, towns, or special districts responsible for providing drinking water, wastewater, and/or stormwater services. To learn more, please visit their website [here](#).

## **IN-2-Market**

IN-2-Market (I2M) was established to help the tristate region of OH-PA-WV bring new technology to market, and recently concluded successful pilot projects developing and demonstrating tools to help small and medium-sized manufactures understand their carbon footprint, put plans in place to mitigate it, and connect with financing to modernize/decarbonize. IN-2-Market has a specific focus on social and environmental justice issues and recently established an alliance of major private sector energy-related companies called the Appalachian Energy Future, which includes natural gas giants EQT and Equinor, GE Gas Power, Marathon Petroleum, Shell, US Steel and others. IN-2-Market has extensive networks of public and private partners across the tristate area and is actively working to educate local and county officials and others about new technologies that are promising in the transition to cleaner energy.

## **The TEAM Consortium**

The TEAM Consortium is a tristate (OH-PA-WV) public-private partnership that is nationally recognized as a best practice collaborative (by ARC, DOE, others). TEAM aligns energy and manufacturing sector needs for skilled labor and its network of community colleges (who share a cooperative MOU), workforce boards, economic development entities, public officials, and private sector partners respond with updated curriculum and easy on-line access to quick skill-building, certifications, and degrees. TEAM's DIY website showcases 47 energy-related occupations, with daily tasks, a video, education and job requirements, salary estimates, and direct connections to local education & training providers.

### ***3.22 Are there technical assistance programs that should be examined as key models for supporting rural and remote areas in improving energy infrastructure?***

Our members identified federal and state programs that can be examined as key models for supporting rural and remote areas. Please see below.

#### **DOE Combined Heat and Power Technical Assistance Partnership (CHP TAP)**

DOE's CHP Technical Assistance Partnerships ([CHP TAPs](#)) promote and assist in transforming the market for combined heat and power (CHP), waste heat to power, and district energy technologies throughout the United States. The CHP TAP program helps lower market barriers or help increase customer benefits from the adoption of grid-edge technologies. To further develop the CHP market, CHP TAP provides education, outreach and technical assistance to a wide spectrum of stakeholders, including commercial and industrial end users, state decision-makers, electric and gas utilities, trade associations and nonprofit organizations. Assistance includes evaluating the economics, reliability and environmental value of proposed energy systems. CHP TAP also administers the Packaged CHP Accelerator program, which is designed to validate packaged CHP technologies and verify improved project performance, cost, and installation practices to de-risk the procurement process. Central to the Accelerator is the Packaged CHP eCatalog, an opensource, web-based system that hosts DOE-recognized packaged CHP systems. The Accelerator includes CHP Engagement Partners, which are utilities, utility co-ops, states, municipalities, and federal agencies that commit to promoting packaged CHP through the use of CHP deployment or incentive programs. The CHP TAP program has been a successful model in the deployment of grid-edge technologies. OCED should consider similar models in implementing the ERA program.

#### **The Pennsylvania Technical Assistance Program (PennTAP)**

The Pennsylvania Technical Assistance Program ([PennTAP](#)) at Penn State is a federal, state, and University partnership to stimulate statewide economic development. PennTAP's statewide network of expert technical advisors helps organizations maximize their competitiveness through in-person and virtual consultations, unbiased technical advice, online educational resources, and connections to Penn State experts, resources, and programs. PennTAP helps Pennsylvania companies improve their competitiveness, by providing a limited amount of free technical assistance to resolve specific technical questions or needs, while it facilitates connections to other relevant information, resources and/or programs. PennTAP is a statewide network of geographically-dispersed technical specialists and advisors with expertise in a variety of focus areas, including advanced information technology, environmental compliance, energy efficiency and conservation, operations improvement, occupational safety and health, product development, federal Small Business Innovation Research/Small Business Technology Transfer proposal development, technology transfer and commercialization. The program focuses on smaller businesses that typically lack the expertise and/or resources to address these types of issues in-house. PennTAP is positioned to cultivate deeper client and community relationships across Pennsylvania. PennTAP's advisors are embedded within their respective Penn State campus community to better collaborate with Penn State partners and connect industry clients to student talent and premier university resources. OCED should consider similar models in implementing the ERA program.

#### **Category 4: Open**

***4.1 Please provide any additional information or input not specifically requested in the questions above that you believe would be valuable to help DOE develop the ERA Program.***

In addition to the responses above, the Center for Sustainable Business (CSB) and its stakeholders propose the following recommendations to help ensure equitable implementation of the ERA program.

#### **(1) Support for first-time and less-resourced applicants**

To overcome many of the issues faced by first-time and less-resourced applicants, OCED may want to consider providing targeted resources at no cost to these types of applicants. We recommend that these resources include strategic outreach, such as easily accessible training and webinars for new applicants, consulting services to support the review of proposals before submission, examples of well-written applications or step-by-step guidelines.

## **(2) Provide Matchmaking & Teaming Resources**

As previously stated, one of the primary hurdles in submitting a competitive application is the time required to recruit high-quality stakeholders, partners and collaborators. Time is a resource remote and rural communities cannot afford. OCED should help facilitate the formation of high-quality applicant teams, foster partnerships and catalyze investments in these programmatic areas. OCED, should look to two examples, which we have highlighted below of how DOE has implemented solutions to overcome this hurdle. These tools can be a valuable resource for identifying key remote and rural regions primed for development and for connecting industry stakeholders with other key stakeholders in their region.

- **H2 Matchmaker Tool:** DOE has developed an online platform, [the H2 Matchmaker tool](#), that highlights and connects hydrogen suppliers, infrastructure providers, users, and community stakeholders through an online map. The H2 Matchmaker tool relies on hydrogen stakeholders to self-identify and volunteer information about their operations by way of filling an online form. The tool, **Fig. 1**, displays a map using information received through the online form, which stakeholders can use to connect with others nearby. This database is intended to encourage stakeholders to team up to develop clean hydrogen hubs, in alignment with the \$8 billion available for such hubs under the Bipartisan Infrastructure Bill (BIL).

**Fig. 1 - H2 Matchmaker Interactive Map (Beta Version)**

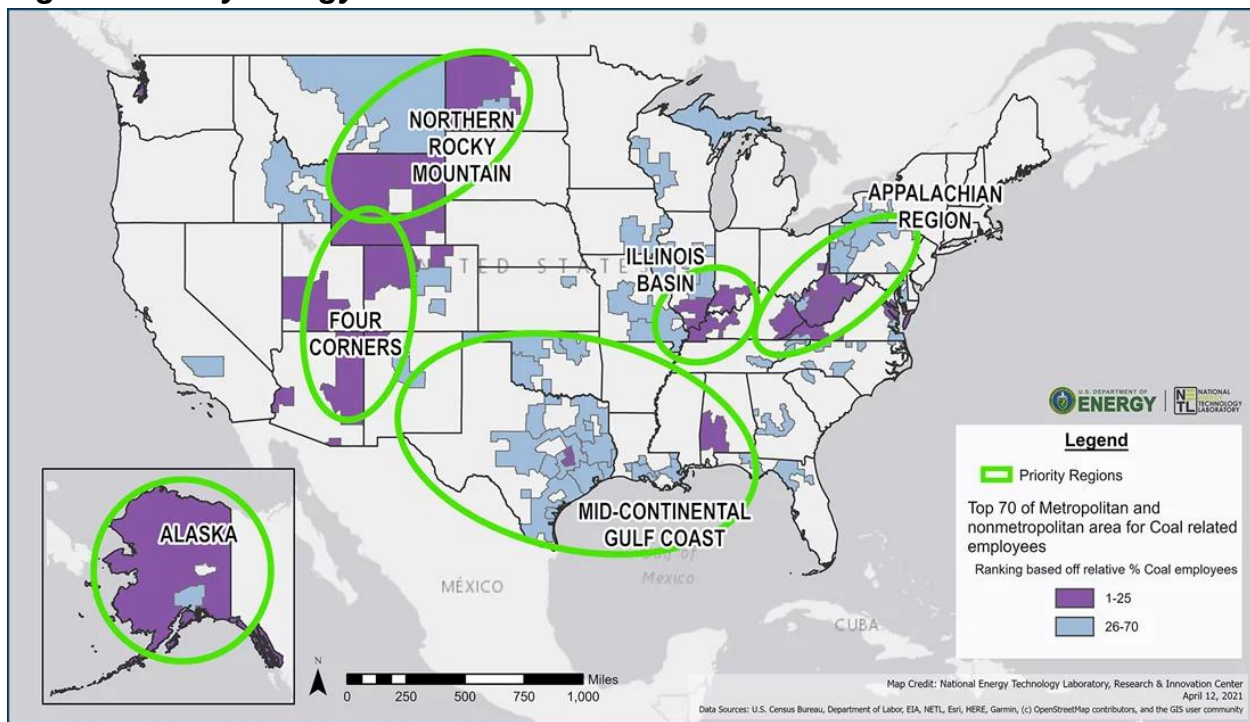


- Teaming Partner List:** OCED, should leverage DOE’s experience in compiling “Teaming Partner List” to facilitate the formation of high-quality applicant teams. These lists, typically compiled in MS Excel, allow organizations who may wish to participate in an application, but do not wish to apply as the Prime applicant to the FOA, to express their interest to potential applicants and to explore potential partners. Information typically collected and compiled under these lists include: Organization Name, Contact Name, Contact Information (phone, email, address), Organization Type, Area of Technical Expertise, Brief Description of Capabilities, and Brief Description of Needs in a Partner. We encourage OCED to also collect information regarding the stakeholder’s status as a remote or rural community (areas with populations of fewer than 10,000 inhabitants). Here are a few notable examples of the use of Teaming Partner List by DOE: (1) the Renewables Advancing Community Energy Resilience ([RACER](#)) Funding Program, (2) the Geothermal Drilling Technology Demonstration Campaign ([Drilling Demos](#)) and (3) the [Fiscal Year 2021 Systems Integration and Hardware Incubator](#) Funding Program.

**(3) Partner with Existing Federal Programs**

OCED should consider cooperating with existing federal programs that are addressing remote and rural communities such as [the Interagency Working Group on Coal and Power Plant Communities and Economic Revitalization](#). The Interagency Working Group represents twelve federal agencies and actively engages with remote and rural communities and reviews domestic and international models for economic revitalization, compiled recommendations from advocacy groups and academics, and sought guidance from representatives of Energy Communities. Stakeholders include labor unions; community development organizations; local, regional, and tribal governments; the private sector; and philanthropic interests. The Interagency Working Group highlights their priority energy communities in **Fig. 2**, which aligns with OCED’s ERA program.

**Fig. 2 – Priority Energy Communities**



A partnership with the Interagency Working Group would create a comprehensive climate and energy policy outlining timelines to phase out coal while supporting financially dependent communities during the energy transition.

We encourage OCED to build upon the report published by Chesmore, et al. (2021) that highlights recommendations and improvements to the Interagency Working Group.

Chesmore, et al. (2021) recommends the following key strategies, which are reliant on each other, and when implemented in tandem can provide holistic, long-term support for remote and rural communities:<sup>5</sup>

- Land reclamation would repurpose mined land for more economically viable renewables,
- Job retraining would ensure the involvement of community members and restore permanent job opportunities, and
- Community support would ease the burden of the transition by providing short- and long-term financial support.

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<sup>5</sup> See Chesmore, G. E., Starr, R. L., Van Hoeck, R., & Ward, M. L. (2021). The Crisis of US Coal Communities: Strategies for a Just Transition to Renewable Energy.