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**Subject: Response to DE-FOA-0002686-RFI**

**U.S. DOE Office of Fossil Energy and Carbon Management and the National Energy Technology Laboratory:**

This response to DE-FOA-0002686-RFI is submitted on behalf of the Reclaiming Appalachia Coalition (RAC) and the Ohio River Valley Institute.

Founded in 2016, RAC is a regional collaboration that seeks to spur mine reclamation projects throughout Central Appalachia that are responsive to community needs and interests and accelerate the growth of new, sustainable sectors.<sup>1</sup> RAC consists of lead non-profit organizations states—Appalachian Voices, Coalfield Development Corporation, and Rural Action. These organizations work with communities and partners to identify places where reclamation of legacy coal mine features, such as acid mine drainage (AMD) and waste coal piles, could yield transformative economic impacts for the surrounding communities. Working with technical experts at Downstream Strategies and other reclamation experts, RAC develops these ideas into viable project concepts and helps local partners secure funding to implement the innovative project.

Each project is a partnership with local stakeholders and community members; RAC helps conceptualize and bring to life ideas that represent a microcosm of the larger coal-to-sustainable economy transformation taking place across the region through Innovative Mine Reclamation. This model replaces the stale strategies of the past with site-specific, community-minded, and sustainable approaches for vibrant end uses that will yield economic and environmental benefits for years to come. Our projects follow the principles of Innovative Mine Reclamation:

- Go above and beyond the legal reclamation requirements for AML features and bond forfeiture properties to create sites that are primed for sustainable economic development, native ecosystem restoration, or both.
- Make projects appropriate to the specific place they are occurring.
- Be inclusive of multiple community stakeholders, especially in addition to traditional decision makers, in project development.

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<sup>1</sup> <https://reclaimingappalachia.org/>

- Promote environmental sustainability, and do not cause additional harm.
- Make projects financially viable beyond the initial grant period.
- Introduce new, viable concepts to the Appalachian coalfields that could be successfully replicated on similar sites throughout the region.

The project contemplated in this RFI has great potential to help clean up areas impacted by the negative environmental, health, and economic impacts of the coal industry. If done well, the surrounding communities could benefit both financially and environmentally; but if care is not taken, the project could worsen conditions for the surrounding communities. We suggest that DOE adopt these principles for any of its work that impacts mining communities, particularly for those projects that purport to remediate mined land. In particular, coal refuse (i.e., gob, coal waste) and AMD sites are key potential feedstocks for such a facility. These sites represent legacy damage from the mining sector of the coal industry and fall under the broader category of abandoned coal mine sites. Given our organizations' extensive experience with these sites, much of our recommendations below speak to coal refuse and AMD considerations. We recognize that coal ash is also a key potential feedstock, and we speak to some differences in considerations for each feedstock.

In particular, DOE should commit to selecting a project that will not cause additional harm to the surrounding community and watershed. The risk of new, potentially toxic, waste streams from the facility is significant. Rare earth element (REE) separation and processing technologies are still nascent and their industrial-scale impacts uncertain. Some separation processes could create new waste streams--of both potentially hazardous chemicals and leftover deleterious material that remains after REE separation. It is imperative that DOE prioritize processing technologies that will not create additional dangerous waste streams, and that the facility have high quality disposal methods of any waste streams. Given that a key goal of this facility is to reduce environmental harm, DOE should not pursue the project unless or until a facility can achieve these goals. Additionally, we recommend that DOE adopt the recommendations described below either in its FOA or in its review and implementation of the FOA.

A. Facility Definition 1. Do you have an existing facility that can be used/ modified-retrofitted to meet the requirements of the demonstration facility?

No. Our response will speak generally to any potential project funded by DOE. Given that Central Appalachian states contain a concentration of both legacy coal mining and coal generation sites, the region contains significant coal refuse, AMD, and coal ash waste that continues to threaten nearby communities and watersheds. According to the federal inventory of AML managed by the Office of Surface Mining Reclamation and Enforcement, Central Appalachian states of Kentucky, Ohio, Tennessee, Virginia, and

West Virginia contain nearly 8,000 acres that are likely to contain coal refuse (5,088 acres of Dangerous Piles and Embankments; 2,619 acres of Gob piles). According to Earthjustice's monitoring of industry-reported data, the Central Appalachian states of Kentucky (43 units), Ohio (33 units), Tennessee (18 units), Virginia (17 units), and West Virginia (14 units) contain a total of 125 disposal sites of coal combustion residuals (CCRs, or "coal ash"). Though an official measure of the extent of AMD does not exist, thousands of miles of streams in Central Appalachian states are AMD-impacted.

4. Regarding feedstocks, please address the following: a. Besides AMD fluids and precipitates and mine wastes (refuse tailings), please comment as to what types of materials should be considered as "deleterious materials" to be used as unconventional feedstock resources.

For any type of coal-related feedstock, DOE should adopt a general principle that the facility should prioritize feedstock sites that are otherwise unlikely to be reclaimed or disposed of. For example, "deleterious materials" from mining sites should be defined as only mine waste or materials from abandoned mine land sites (as that term is used in Title IV of SMCRA) or other mines where no party can be held financially responsible for reclamation. Similarly, "deleterious materials" from coal ash sites should be defined as sites that are causing environmental harm — such as by leaking into groundwater — but are unlikely to be remediated in the near term, as opposed to newly produced coal ash.

The great advantage of a facility contemplated in this RFI is that it could help remediate mining and coal ash sites that would otherwise continue to remain unmediated under current regulations, market conditions, and cleanup programs. Operators of mining sites and coal ash disposal facilities should continue to be held responsible for remediating the waste at their sites or facilities so the large problem of legacy coal damage does not continue to grow.

Furthermore, eligibility should be defined in such a way to ensure that the funding opportunity does not encourage new coal mining or new coal power plants, or provide financial support to prolong the life of any operating coal mine or coal power plant. To that end, DOE should consider limiting coal ash feedstocks for the potential facility to those associated with retired plants (where ash disposal sites are unlikely to be remediated otherwise). Providing funding to a facility that purchases materials from a currently-permitted mine or otherwise financially supports a currently-permitted mine goes against the purpose of the funded facility to "provide environmental benefits," and may instead cause additional environmental harm.

c. Would including the ability to incorporate multiple feedstocks in your demonstration facility mitigate risks or increase them? Please specify affected risks and elaborate

To the extent possible, the FOA should encourage the development of a facility that can utilize multiple feedstocks in order to maximize the long-term financial viability and environmental benefits of the funded facility. For example, the owner of a facility that can only utilize gob may quickly run into problems finding accessible feedstocks for its facility. Some gob piles are large and easily accessible by established roads, but many such piles are small and located far away from roads suitable for trucking. Gob is a limited resource, and therefore a facility that only uses gob will have a limited lifespan. Other such waste materials will face similar challenges; therefore, a facility that can utilize multiple feedstocks will be most beneficial for the community in which it is located and the surrounding environment.

While utilizing multiple feedstocks can enhance financial viability, it should also be balanced against potential risks. For example, an industrial process that can successfully separate REEs from a wide range of feedstocks but produces significant volumes of dangerous waste has a great likelihood of causing additional harm to the community despite its ability to process REEs from multiple sources.

6. After DOE's involvement in the demonstration facility concludes, what obstacles would need to be overcome for you (or another stakeholder) to continue operating the facility commercially to establish an enduring domestic supply of REEs and CMs?

Consistent with the principles of Innovative Mine Reclamation, DOE should not fund any project that does not demonstrate financial viability beyond the initial grant period.

As stated above, one potential challenge for the long-term viability of a funded facility will be the limited supply of the feedstock. While there is a large amount of waste from mining operations and power plants across the region and country, the further away that waste product is from the processing facility, the less financially viable it is to extract and transport that material to the facility. One exception to this may be a facility that utilizes AMD as its feedstock. AMD is an indefinite problem, and thus may provide a longer-term supply of feedstock. If an applicant proposes a facility that uses AMD, the applicant should describe how the facility will continue to treat the water at the site long term regardless of whether the business of extracting REEs continues. The treatment facility should be designed to be functional regardless of whether the targeted materials continue to be extracted for industrial use, and the design of the facility should not prohibit in any way the long-term treatment of AMD at the project site.

At the inception of the facility, DOE should establish processes to monitor and regulate the facility even after the initial funding period. Sooner or later the facility will use all of the material from its initial feedstock sites and will switch to new sites as feedstock sources. The deleterious material at those sites may be different—even slightly—in

composition, and DOE should continue to monitor how those changes impact processing and disposal of waste from the facility.

B. Research and Development Needs 1. Are the extraction, separation, recovery, and refining technologies in your prospective facility ready for demonstration or is additional R&D needed?

We support the development of new innovative reclamation techniques and uses of coal waste materials. However, the communities where such waste materials are located are already dealing with negative environmental and health impacts that were unexpected or unknown when new industry began operations in the area and should not be put at further risk of unknown environmental and health impacts. Given the significant risks from REE separation technologies, DOE should not fund a project without having first proven that its separation technology is both feasible and, crucially, safe, and must avoid funding a facility that will have unknown or harmful impacts on workers or the surrounding environment and communities where the facility is located, or from where the feedstock materials are extracted.

C. Location, Cost, Schedule 1. Related to facility location, please address the following:

c. What siting and environmental justice concerns have been considered? Please provide specific concerns, e.g., siting, transportation, exposure to waste from the demonstration facility, other public health impacts, etc.

The following siting and environmental justice concerns should be addressed in each application for the eventual FOA:

- Existing environmental and health conditions, including air quality, water quality, asthma, heart disease, hazardous waste facilities, unreclaimed mines
- Environmental and health impacts from extraction of feedstock materials; transportation of feedstock and waste materials; facility operation—including separation and processing— and waste disposal/storage; and any water discharges, including the proximity and risk to all nearby groundwater and surface water
- Health impacts on workers
- Impacts on local government services and tax revenues
- Impacts of increased traffic and/or noise
- Climate change impacts on the facility, feedstock extraction, byproducts and waste storage or disposal, including from wildfires, flooding, and drought
- Socio-demographic characteristics of nearby community
- Impacts of electricity and water use at the facility on: the power grid; local water infrastructure; and access and affordability of water and electricity for the nearby community

D. Equity, Environmental, and Energy Justice (EEEJ) Priorities and Community Engagements, Benefits, and Impacts 1. What strategies, policies, and practices can project developers deploy to ensure that the goals of Justice40 are achieved? How should these be measured and evaluated?

In order to ensure that the goals of Justice40 are achieved, project developers should ensure that the facility not only provides family-sustaining union jobs but that these jobs are accessible to the local community--including through training/apprenticeship programs that make these jobs accessible to disadvantaged groups and provide a pathway out of poverty. Additionally, DOE should prioritize the selection of a facility that is designed to clean up coal waste in disadvantaged communities to ensure the environmental benefits of the facility are targeted in disadvantaged communities. For many proposed facilities, it is likely that feedstock materials will be sourced from numerous census tracts, so it is unlikely that all feedstock materials will be collected from disadvantaged communities, but the facility owners should be required to demonstrate how their facility will target disadvantaged communities in their consideration of feedstock sites.

Success should be measured by numbers related to:

- Employment impacts, including number of new jobs, diversity of new hires (including racial and gender diversity), local hires, pay levels relative to what it costs to attain a modest standard of living in the area (for example, as measured by EPI's Family Budget Calculator<sup>2</sup>), fringe benefits, workplace injuries, health and safety violations, fair labor practices.
- Employment training and apprenticeship opportunities, including whether the opportunities are paid, how many are from a nearby community, and diversity of trainees (including racial and gender diversity)
- Environmental impacts, including environmental damage abated at feedstock site, amount of deleterious material cleaned up, location of materials cleaned up, ecosystem condition of land after remediation has occurred, amount of money spent on clean-up in each jurisdiction, and, crucially, air and water quality impacts of facility processing and waste disposal on the nearby community
- Tax revenue benefits for the local government where the facility is located, as compared to impact of the facility on government services
- Details regarding who benefits from the facility's profits (which company/entity benefits from any facility profits, location of that company/entity), including profit-sharing programs with the workforce and/or community

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<sup>2</sup> <https://www.epi.org/resources/budget/>

These numbers should be reported publicly and updated quarterly, and any imbalance of the benefits should be addressed promptly by the project partners. These numbers should be shared with the public/community at regular public meetings.

2. What equity, environmental, and energy justice concerns or priorities are most relevant to local communities around your proposed facility? How have/can these concerns or priorities been/be addressed?

Most of the communities where this facility could be located will have significant existing environmental justice and equity concerns stemming from the mining or power generation industry. Specific, common issues that should be considered include:

- Existing environmental harm from abandoned mines, such as water quality issues, methane pollution, landslides, and flooding; and from coal ash disposal, such as water pollution, fugitive dust, and risk of pond collapse
- Effect of climate change on existing environmental hazards (e.g., worsening landslide and flooding issues)
- Impacts of the black lung disease and opioid epidemics
- High rates of asthma and heart disease
- Low income rates, and high income inequality
- High energy burden
- Low educational opportunities and attainment

These issues should be addressed by:

- Ensuring that no additional environmental and health impacts are added to already overburdened communities
- Ensuring that the facility does not contribute to the climate change crisis
- Ensuring that new facilities and any storage facilities for hazardous waste, feedstocks, or byproducts are protected from extreme weather events
- Ensuring that the project developers go above and beyond the legal reclamation requirements at the sites where feedstocks are extracted
- Ensuring that additional tax revenue flows to the communities, and that the facility does not present a net additive burden on local government services
- Ensuring that jobs created by the facility provide a living wage and good fringe benefits, and workers are safe and can exercise their right to organize
- Ensuring that training and employment opportunities include outreach to historically marginalized groups and that opportunities are accessible to these groups through paid training programs and other services
- Ensuring that the financial value created by the facility is shared broadly among the owners, workers, and community—and that its distribution does not contribute further to high levels of income inequality

### 3. What measures should project developers take to ensure that harm to communities with environmental justice concerns are mitigated?

Applicants for funding should be required to clearly identify environmental justice concerns, and how they will be addressed, including the following:

- Is the community where the facility will be located already overburdened with high rates of pollution, asthma, heart disease, or other health and environmental problems? How will the facility improve or worsen those issues?
- How will workers be protected from injury or exposures to potentially harmful materials including feedstock materials, byproducts, and waste?
- How will air or water pollution from the facility be avoided--or how will communities be protected from air or water pollution from the facility?
- How will the communities be protected from dust from feedstock materials, waste materials, or byproducts during the transportation of those materials?
- Is the community where the facility will be located already overburdened with traffic pollution? Will the facility contribute to increased traffic noise and pollution?
- Does the community where the facility will be located have low rates of workforce participation? How will the project applicants prioritize local hiring and training?
- Does the community where the facility will be located have low income rates? How will the project applicants help to alleviate poverty rates in the area? Will the facility owners pay employees a living wage?
- Does the proposed project improve the environmental condition of the land and water where feedstock materials are extracted from? Does the extraction process cause additional harm to the surrounding environment?
- Does the facility contribute to climate change, or help reduce GHG emissions?
- Does the facility manager have a primary as well as secondary disposal plan for any materials created or left after the extraction process is complete?

Consistent with the principles of Innovative Mine Reclamation, project developers should be required to go above and beyond the legal reclamation requirements for AML features and bond forfeiture properties to create sites that are primed for sustainable development, native ecosystem restoration, or both. A detailed reclamation plan should be required as part of the application. Specifically, at the mineral extraction sites, the project developers must fully reclaim those sites including any necessary regrading and revegetation to make the site usable for either further economic use, or by restoring the ecosystem. Projects should use native plants for revegetation, and address any risk of landslide, subsidence, or flooding. If project developers plan for the site to be used for future economic development, the applicant should clearly identify what entities will take ownership of the site and their plans for post-reclamation economic development. Similarly, a detailed remediation plan for coal ash sites should be required that includes



mitigation of any lingering environmental damage and a plan for future use or restoration of the ecosystem.

Additionally, in order to prevent the funded project from becoming another source of environmental pollution, project developers should be required to set aside funding for decommissioning after the site stops production. A detailed decommissioning and transition plan should be included as part of the application, including how any remaining feedstock materials, byproducts, or waste products will be disposed of.

4. Regarding community engagement, please address the following: a. Are the community organization and industry partners engaged in this effort clearly organizations that represent underserved communities as a core element of their mission?

In the forthcoming FOA, DOE should require that project applicants have community partners engaged that represent the environmental community, organized labor groups, local community action agencies, and local employment agencies. Having local government(s) as partners is important but is not sufficient to check the box of representation of underserved communities. The applicant should be required to identify what “underserved communities” are impacted by the project and how they will be engaged in the project. It should be noted that many underserved communities are represented by organizations with no or limited paid staff, and may therefore have difficulty participating in this project. If necessary, project developers should provide stipends to volunteers or staff to allow for their participation.

b. How can the project team ensure community-based stakeholders/organizations are engaged and included in the planning, decision-making, and implementation processes (e.g., requiring community-based organizations are part of the project team)?

We support the suggestion that community-based organizations be required to be part of the planning team. As noted above, project developers should provide stipends to volunteers or staff to allow for their participation if necessary. Potential organizations to involve include: community nongovernmental organizations, environmental organizations, union chapters, religious organizations, and small businesses.

DOE should establish a standing advisory committee with representatives from the groups outlined above and should charge this committee with monitoring and advising the creation and ongoing operations of the facility. The committee could routinely review data on the facility and its impacts (such as those outlined in section C.1.c. and D.1. above and on a public website as outlined below) and advise DOE and the operator of the facility. Such a committee could be incorporated into a Community Benefit Agreement (CBA) with the facility.

The project developers should be required to establish a public website with detailed project information including project timelines, job and training opportunities, feedstock materials, facility byproducts, waste materials (including measures taken to limit worker and community exposure, potential risks, and associated permits), environmental impacts, traffic impacts, and other notable community and worker impacts.

Project teams should maximize engagement from community-based stakeholders by providing transparent, public information in multiple formats, and holding regular public meetings. In planning such meetings, project developers should consider the following:

- **Local Leadership Involvement:** Local leaders must be involved in early planning stages, be invited to help promote attendance at the event, and be present at each event. Project developers should work with community leaders to identify mtg facilities in the neighborhoods of/already known by impacted sectors they are trying to reach. A local leader should also be involved in introducing the purpose of the event at the start of each meeting. This will make sure there is a connection to the local community, to ensure trust in the process and to make sure the events are grounded in the realities of the local impacted communities.
- **Accessibility:** Translation services must be available to ensure events are accessible for non-English speakers and the hard of hearing. Events must be held in wheelchair accessible buildings and must comply with local Covid restrictions.
- **Advanced Notice:** All meeting announcements/invitations should be distributed with at least 1-month notice.
- **Clear Objectives and Scope:** Announcements for public meetings or public input opportunities should clearly communicate the purpose of the meetings, including details regarding the location and impact of the facility and the feedstock materials. Importantly, attendees should be informed of how their comments will be used.
- **Day/Time Recommendations:** Some of the events associated with community meetings should take place on weekends, other events should be scheduled for the evening or during lunch hours to enable broad participation and ensure that there are opportunities for participation outside of typical workday hours.
- **Online and in-person engagement opportunities:** Both in-person and remote attendance opportunities should be provided in order to accommodate those with lack of broadband internet access and those with a lack of transportation.
- **Meeting announcements:** Meetings must be noticed online and in newspapers.
- **Diverse community voices/experts:** Presenters/speakers at community meetings about the proposed facility should not be limited to the project owners, but rather should lift up diverse community voices - including labor, health, and environmental representation, and including people of color and gender diversity.

- **Professional facilitation:** Paid staff (administration staff or contracted local facilitators) should facilitate any public input opportunities.
- **Transparency:** All sessions should be recorded and made available publicly within 2 weeks after the event has concluded. A written summary of each meeting should also be provided to attendees and the public.

c. How will you support meaningful and sustained engagement with relevant disadvantaged communities?

As stated above, community stakeholders should be part of the project team and/or advisory committee, and stipends should be provided to those team members as necessary to ensure their sustained engagement. Representatives from the community should be given advisory, if not decision making, roles during the lead up to the project. Project teams should host quarterly meetings to hear public comment, take questions, and provide updates regarding the project. Additional public meetings should be hosted when there are major updates, changes to the facility plan, unexpected problems, new training opportunities, etc.

5. Regarding community benefits and impacts from your proposed facility, please address the following: a. How will the community benefit from the construction and operation of a REE and CM production facility? What are the co-benefits of the project not captured by revenues of the operation?

DOE should explore a model whereby the facility is owned and operated as a federally-owned enterprise rather than owned and managed by the private sector. There are a few reasons why such a model should be seriously considered for this facility in particular. First, the capitalization of the project is being funded by the public via significant investments under the IIJA. Second, the federal government has strong public policy interests in the long-term operations of the facility, including national security interests related to consistent domestic processing of REEs at prices that do not disrupt American supply chains, and the remediation of coal-impacted areas. In addition, federal ownership enables the benefits of the facility—particularly the net financial value created by its operations—to be shared more broadly than under private ownership, and enables the public to more directly monitor, avoid, and/or address the significant risk of environmental harm from its industrial processes.

If such a model is not pursued, DOE should at minimum require a CBA between the project developer and impacted groups in pursuit of the benefits outlined above. The FOA should require facility owners to formalize a CBA with directly impacted communities and require project applicants to demonstrate that the project will have a:

- Net positive environmental impact in the impacted communities (where the facility is located, where feedstocks are extracted, and where any waste materials are stored).
- Net positive climate impacts (an overall reduction in greenhouse gas emissions resulting from the project).
- New training and job opportunities in impacted communities as detailed above, and protection of the right to organize
- Net increase to local tax revenue.
- Profit-sharing program with workers and potentially also the community

In addition to the CBA regarding the operation of the facility, DOE should ensure that there is a Project Labor Agreement (PLA) regarding the construction of the facility. As the White House outlined in a recent executive order<sup>3</sup> requiring PLAs on public construction projects above \$35 million, there are many benefits to PLAs. By addressing coordination challenges and uncertainty in the contracting process that can be associated with large construction projects, PLAs help lower construction costs, ensure high quality construction, and establish fair wages and benefits for workers.<sup>4</sup>

b. Are the local communities, in particular disadvantaged communities, interested in or supportive of the construction and operation of a REE and CM production facility?

Project owners should be required to demonstrate support from impacted disadvantaged communities using letters of support from impacted communities. Letters of support from local governments are not sufficient to meet this requirement; project owners should seek support from local nonprofit organizations, organized labor, and other non-governmental entities. Local government entities do not necessarily represent the interests and concerns of environmental organizations, workers, racial minorities, or other underserved communities.

i. If a community organization or advocate, how can the local community's needs best be addressed?

While each community's specific needs will vary, it is likely that the top needs communities will want to be addressed will include:

- Improvements to environmental condition of the land, including improvements to air and water quality
- Increases to local tax revenue
- New and better quality job opportunities, and increased worker power

<sup>3</sup><https://www.whitehouse.gov/briefing-room/presidential-actions/2022/02/04/executive-order-on-use-of-project-labor-agreements-for-federal-construction-projects/>

<sup>4</sup>[https://www.epi.org/blog/project-labor-agreements-on-federal-construction-projects-will-benefit-nearly-200000-workers/?mc\\_cid=8f309ddcda&mc\\_eid=eb2b5f4c60&utm\\_source=pocket\\_mylist](https://www.epi.org/blog/project-labor-agreements-on-federal-construction-projects-will-benefit-nearly-200000-workers/?mc_cid=8f309ddcda&mc_eid=eb2b5f4c60&utm_source=pocket_mylist)

- New training opportunities

Project applicants should be required to address each of these categories of community needs, specific to the location of the facility and feedstock extraction sites.

ii. If industry or other, please summarize existing efforts at community engagement/support for development in the community being considered.

DOE should require project applicants to enter into a CBA with communities impacted by the project (including communities where the facility is located, where feedstocks are extracted, and where waste is stored). At least one non-profit, non-governmental organization should be party to this agreement—and preferably a representative of the workers who operate the facility.

E. Target Market, Business Model, and Partnerships 4. Please clearly articulate, with concrete actions, how regional economic growth and its benefits will be shared with underserved populations.

In evaluating the benefits to underserved communities, DOE should request information related to the following impacts:

- Local tax revenue impacts
- Infrastructure improvements (e.g., roads, water infrastructure)
- Local employment opportunities, and associated pay level and fringe benefits.
- Local training opportunities
- Environmental remediation benefits, including as compared to any negative environmental impacts associated with the facility.
- Long-term land ownership issues (e.g., is there an opportunity to transfer/sell remediated land to local ownership after clean-up has occurred).

5. Please comment on your Business Plan with respect to the sale and distribution of the REE and CM materials that are produced in your facility. If these materials are sold during the project period, do you have a preference for how the program income would be allocated back to the project (e.g., addition, cost share, or deduction)?

DOE should prioritize projects that include revenue sharing with workers and local impacted communities. One model of the latter for consideration is a model used by The Nature Conservancy (TNC) in Central Appalachia as part of its Cumberland Forest Project. As the landowner on properties associated with active mineral extraction, TNC receives a share of profits from the sale of those minerals. TNC has partnered with the local college to use those profits for a grant program supporting local businesses and community groups.<sup>5</sup> A similar model could be adopted by the funded project developers.

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<sup>5</sup> <https://www.nature.org/en-us/newsroom/tnc-uva-southwest-virginia-grant-program/>

6. Regarding supply chains and byproducts, please address the following:

b. Do you expect that products other than REE or CM will be produced from the feedstock(s) used in your prospective facility? Will these be outputs of your facility, and have/will you find markets for such products? If so, please explain.

It is likely that a facility supported by the eventual FOA will produce unusable byproducts such as ash or usable byproducts such as combustible biomass materials. Any such materials that cannot be used as a feedstock for construction materials, batteries, or other technology applications should be disposed of in lined landfills away from critical water resources or other appropriate, proven safe disposal methods. Any byproducts in particular from waste coal or gob reclamation should not be burned for electricity. Burning waste coal or other deleterious materials produces more pollution than coal itself and only serves to move pollution from the ground to the air, producing greenhouse gas emissions exacerbating the climate crisis and creating air pollution that negatively impacts human health in the surrounding area. This funding must not be used to incentivize the burning of waste coal or extend the life of existing coal plants.

Given that REEs are a small portion of the total mass of many potential coal-related feedstocks, it is likely that significant deleterious materials will remain after REE separation. As outlined above, separation technologies should be prioritized to the extent that they limit the volume of waste streams and the degree of risk from waste streams (i.e., some separation agents are more toxic than others). To the extent that a facility has waste streams, any funded project should clearly outline safe waste disposal methods that are routinely monitored—and the developer should set aside funds to address any unforeseen problems with such disposal.

7. As it relates to partnerships, please address the following: c. Please identify all partners that would be part of your team. Also address: i. Are Minority Business Enterprises and Minority Serving Institutions engaged; and if so, what role do they play?

In order to achieve environmental and economic justice goals, DOE should prioritize funding projects that include partners that are minority-owned or -led organizations/businesses.

iv. Please describe your existing partnerships with organizations performing remediation and/or reclamation, and the potential users and use of the products or waste streams from the demonstration facility.

Companies that will perform the necessary remediation or reclamation should have a demonstrated track record of quality reclamation/remediation work, and should not have any record of environmental or labor violations. As stated above, any waste created from the facility should not be burned; applicants should be required to include in their

proposals a plan for disposal of waste materials in properly lined landfills or other appropriate, proven-safe disposal methods.

5. Would you consider working with local coalitions to find ways to match regional workforce resources with hiring needs?

The DOE's FOA should require applicants to describe how they will work with local organizations (such as local economic development associations, unions, colleges, schools, and industrial development associations) to match workforce resources with jobs resulting from the facility. This is a crucial element to achieving economic justice.

G. Other 1. Please provide feedback on DOE's vision and approach shown in Exhibit 1 and Exhibit 2.

We have concerns with the following phrase in DOE's vision in Exhibit 1: "Optimize potential value of natural resources across coal basins throughout the United States by 2030." DOE's vision should prioritize the health and well-being of the coalfield communities that have long been the victims of extractive economies, rather than the potential monetary value of the resources located in those communities. Any vision that prioritizes the value of resources over the value of human health exacerbates the environmental injustices that have persisted in these regions for more than a century. We suggest amending the vision to prioritize human health and wellbeing and environmental remediation over the extraction of value from the natural resources.

Furthermore, the language around environmental and economic justice should be strengthened to *require* projects developers address and achieve environmental and economic justice, rather than simply *pursue* those goals.

Conclusion

The RAC and ORVI appreciate the opportunity to respond to this RFI. We would be excited to serve as a resource for the development of the FOA or future DOE programs that impact abandoned coal mine sites. Please contact us with any further questions regarding this topic.

Sincerely,

The Reclaiming Appalachia Coalition (Appalachian Voices, Rural Action, Coalfield Development Corporation, and Downstream Strategies) and the Ohio River Valley Institute