



CREATING GOOD JOBS, A CLEAN ENVIRONMENT, AND A FAIR AND THRIVING ECONOMY

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**Response to [Request for Information](#): Office of Fossil Energy and Carbon Management, Department of Energy's Responsible Carbon Management Initiative**

The BlueGreen Alliance (BGA) unites labor unions and environmental organizations to solve today's environmental challenges in ways that create and maintain quality jobs and build a stronger, fairer economy. Our partnership is firm in its belief that Americans don't have to choose between a good job and a clean environment—we can and must have both. We appreciate the opportunity to provide input to shape the creation of the Responsible Carbon Management Initiative, which will be an important marker of the federal government's commitment to the just and equitable deployment of carbon management across the country. The initiative will provide project developers an important opportunity to pledge to uphold these tenets of responsible operation publicly.

The responsible deployment of carbon management technology will be an important part of the global effort to reduce atmospheric carbon and meet 1.5°C targets. As noted in the Notice of Intent and Request for Information, this must be done alongside deep emissions reductions and these technologies must not be used to provide a license to continue emitting or to slow emissions reductions. All sectors of society must take action to reduce emissions to limit the disastrous impacts climate change is causing our communities and part of the pathway to limiting warming will include carbon management technologies. We can rapidly reduce emissions and simultaneously develop and deploy responsible carbon management and we must do both.

In its April 2022 report on limiting warming to 1.5°C, the Intergovernmental Panel on Climate Change (IPCC) said that in addition to "rapid and deep and in most cases immediate GHG emission reduction in all sectors," some deployment of carbon dioxide



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removal (CDR) technology like direct air capture (DAC) “is unavoidable if net zero emissions are to be achieved.”<sup>1</sup> In their 2023 Synthesis Report, the IPCC again affirmed that CDR is “unavoidable” in order to “counterbalance hard-to-abate residual emissions,” such as those from certain industrial or agricultural processes, as pathways to limiting warming to 1.5°C become increasingly challenging.<sup>2</sup> Princeton University’s *Net Zero America* report similarly relies on some degree of CO<sub>2</sub> capture and utilization or storage as necessary for the U.S. to achieve an economy-wide target of net-zero emissions of greenhouse gases by 2050.<sup>3</sup>

Some of the hardest to abate emissions in the industrial sector should be prioritized as carbon capture technology scales up—especially to prevent the release of process-related emissions into the atmosphere that would otherwise be difficult or impossible to avoid, such as emissions from cement and steel production. The IPCC Special Report on 1.5°C notes that carbon capture, utilization, and storage (CCUS) will need to play an important role in decarbonizing the industrial sector. This is particularly key in manufacturing industries with higher process emissions that result from the conversion of feedstocks into commodities, such as iron ore into iron and steel and limestone into cement.<sup>4</sup> Reducing emissions by deploying CCUS in these sectors will also protect jobs in America’s industrial workforce and make U.S.-made products more sustainable and globally competitive.

Deploying carbon management can also deliver tangible economic benefits for the workers involved in the projects. These industries can support and create jobs that utilize similar skill sets as those possessed by incumbent energy workers, providing a natural opportunity to support existing skilled trades as well as employ displaced fossil fuel workers in the clean economy. Many workers in the construction, operations, and maintenance sectors already possess the necessary skill sets for carbon management deployment. These economic and job quality benefits can be maximized by ensuring that

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<sup>1</sup> Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2022: Mitigation of Climate Change, Summary for Policymakers*, 2022. Available online:

[https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC\\_AR6\\_WGIII\\_SPM.pdf](https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_SPM.pdf)

<sup>2</sup> IPCC, *Synthesis Report of the IPCC Sixth Assessment Report (AR6)*, 2023. Available online:

[https://report.ipcc.ch/ar6syr/pdf/IPCC\\_AR6\\_SYR\\_LongerReport.pdf](https://report.ipcc.ch/ar6syr/pdf/IPCC_AR6_SYR_LongerReport.pdf)

<sup>3</sup> Princeton University, *Net Zero America, Pillar 4: CO<sub>2</sub> capture, transport, and utilization or geologic storage*, 2021. Available online: <https://netzeroamerica.princeton.edu/the-report>

<sup>4</sup> IPCC, *Mitigation Pathways Compatible with 1.5°C in the Context of Sustainable Development*, 2018.

Available online: [https://www.ipcc.ch/site/assets/uploads/sites/2/2019/02/SR15\\_Chapter2\\_Low\\_Res.pdf](https://www.ipcc.ch/site/assets/uploads/sites/2/2019/02/SR15_Chapter2_Low_Res.pdf);

IPCC, “Global Warming of 1.5°C.” Available online: <https://www.ipcc.ch/sr15/>.



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new carbon management infrastructure is built with a skilled, well-trained, union workforce, thereby ensuring the timely and efficient buildout of projects. Utilizing domestic manufacturing of these technologies will also support additional economic and job benefits throughout the supply chain.

As the U.S. accelerates investments in carbon management, projects must deliver tangible and transparent economic, health, and environmental benefits—particularly for the workers involved in the projects and the communities in which they will be built. This can be accomplished in part by ensuring that the buildout of new carbon management projects and infrastructure meets high-road labor standards; utilize community benefit, workforce, and other similar agreements that improve equitable access to jobs, career paths, and other benefits; support mechanisms to improve local economic and environmental impacts; and utilize domestic manufacturing along every step of the supply chain.

To these ends, BGA offers the following responses to the Office of Fossil Energy and Carbon Management and U.S. Department of Energy’s (DOE) questions on the creation and implementation of the Responsible Carbon Management Initiative.

**2) At a high level, do the Principles address what is needed for responsible carbon management? If not, what additional principles may be needed?**

BGA recommends that DOE add the following principle on domestic content:

***Domestic Content*** – Project developers will also seek to utilize domestically manufactured materials of the necessary components needed to construct and operate carbon management technologies, supporting additional economic and job benefits throughout the supply chain. Good, family-supporting, union jobs should be created across the full value chain of carbon management projects: from domestic manufacturing supply chains to construction, operations, and maintenance.

Expanding domestic manufacturing of carbon management components affords the opportunity to build the clean economy on a foundation of good jobs, clean manufacturing, a reliable industrial base, and greater equity. Done right, onshoring carbon management manufacturing can help to:



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- Link climate action with the creation of high-paying manufacturing jobs;
- Reverse the economic and racial inequality exacerbated by manufacturing job losses;
- Counter forced labor and other human rights violations that plague several overseas supply chains;
- Support clean, domestic manufacturing of the steel, cement, and other materials that go into carbon management projects rather than relying on emissions-intensive production overseas;
- Build reliable supply chains for carbon management rather than exposing our climate goals to shipping bottlenecks and geopolitical conflicts;
- Foster global competition in clean technology manufacturing to keep driving down costs; and
- Reduce the embodied emissions in end products by relying on physically shorter supply chains.

### **3) In what ways, if any, could the Principles be revised to better reflect responsible carbon management?**

BGA suggests six of the 11 proposed Principles be revised and expanded upon.

#### **1. DOE's "Community Engagement" Principle has been initially drafted as:**

*Community Engagement* – Project developers will be considerate of parties who are or may reasonably be affected by project deployment and will share project-related information in a timely and transparent way. Project developers will include robust two-way community engagement plans, including training on carbon management technology risks and benefits, so that communities can understand and weigh the potential opportunities and risks of hosting a project—including the social, economic, environmental, and cultural effects. Project developers will provide clear mechanisms for modifying aspects of their projects in response to community priorities and concerns raised through engagement and will provide benefits to communities and workers.

This Principle should be revised and expanded upon as suggested below.



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**Stakeholder Engagement** – Project developers will conduct robust, early, authentic, and consistent outreach and engagement with parties who are or may reasonably be affected by project deployment and will share project-related information in a timely, transparent way. Project developers will include robust two-way community engagement plans, including training on carbon management technology risks and benefits and a process for soliciting and responding to community input. Agencies should identify local sources of public or nonprofit technical assistance to equip communities to engage with developers and regulators and understand and weigh the potential opportunities and risks of hosting a project—including the social, economic, environmental, and cultural effects. Impacted communities should be invited to explicitly express confidence in a project’s safety, such as through letters of support from community organizations before a project proceeds. Consultation and siting processes also should be done in concert with state, local, and Tribal governments.

Labor unions, community-based organizations, Indigenous Peoples, communities of color, low-income communities, impacted workers, and communities impacted by deindustrialization, energy transition, and environmental injustice are examples of some of the stakeholders who should be intentionally sought out and equipped with resources to engage early and meaningfully in the design of a project.

Project developers will evaluate the effects of their plans on vulnerable communities and on all affected stakeholders and endeavor to ensure that all impacted groups benefit from the implementation of the project. Project developers will provide clear mechanisms for modifying aspects of their projects in response to community priorities and concerns raised through engagement.

To achieve this, project developers may—in concert with stakeholders—develop and submit Community Benefit Plans (CBPs). A CBP is a comprehensive strategy outlining actions for community and labor engagement, workforce development, diversity, equity, inclusion, and any other identified community needs. Developers can demonstrate successful community consultation through:

- Letters of support from community organizations, Indigenous Peoples, and unions;
- Detailed plans to engage with and address the concerns of Indigenous Peoples, organizations representing residents and businesses, labor unions and other



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worker organizations relevant to the project, workforce development organizations, local government, emergency responders, communities with environmental justice concerns, and community-based organizations that support or work with low-income communities, communities of color, and communities enduring deindustrialization and energy transition; and

- Including a project implementation strategy to track, measure, and report project impacts on communities.

This promotes collaboration and accountability among developers and ensures that they are working with relevant organizations to advance equity and create high-quality jobs.

Project proposals should be incentivized to include specific plans to negotiate stronger, enforceable agreements like Community Benefit Agreements (CBAs). CBAs are legally binding agreements used to ensure that community and worker interests are identified and operationalized in large development or construction projects. They are to be negotiated with both union and community partners. Project developers should lay out their plans to develop CBAs to ensure that community and worker interests are centered in project development and that the developers are accountable for providing specific benefits negotiated with unions and community groups.

2. DOE's "Workforce Development and Quality Jobs" Principle has been initially drafted as:

*Workforce Development and Quality Jobs* – Project developers will seek to create jobs within host communities and the surrounding region that provide good pay, benefits, predictable schedules, a safe work environment, and with assurances that workers will have a free and fair chance to join or form a union. Project developers will foster broad access to these jobs by making investments in training and career awareness through partnerships that serve workers (e.g., apprenticeship programs, schools, and universities). Project developers will also prioritize providing long-term employment for workers when possible and support the mobility of workers to advance in their careers.

This Principle should be revised and expanded upon as suggested below.



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**Workforce Development and Quality Jobs** – Project developers will seek to create good jobs within host communities and the surrounding region that provide living wages, benefits, predictable schedules, a safe work environment, and with assurances that workers will have a free and fair chance to join or form a union. Project developers will avoid misclassification and excess use of contracted or temporary employees. Construction contractors or subcontractors will also abide by the high-road labor standards outlined.

Many workers in the construction, operations, and maintenance sectors already possess the necessary skill sets for carbon management technology deployment. The carbon management industry can support and create jobs that utilize similar skill sets as those possessed by incumbent energy workers, providing a natural opportunity to support existing skilled trades as well as employ displaced fossil fuel workers in the clean economy. Economic and job quality benefits can be maximized by ensuring that new carbon management infrastructure is built with a skilled, well-trained, union workforce—ensuring the timely and efficient buildout of projects. Strong, well-defined labor-management relationships increase a project’s chances of success by reducing labor disputes and helping to secure a qualified workforce and uninterrupted operations.

Project developers will foster broad access to these jobs by making investments in training and career awareness through union partnerships that serve workers (e.g., union-affiliated training programs). Project developers will also prioritize providing long-term employment for workers when possible and support the mobility of workers to advance in their careers by providing training and retraining programs. Project developers will ensure that construction, operations, and other skilled work undertaken on carbon management projects is performed to specifications is effective, safe, and timely, and ensures that emission reductions are realized.

Project developers can achieve these goals by:

- Committing to not interfere with workers’ rights to organize and collectively bargain and using Project Labor Agreements (PLAs);
- Collective Bargaining Agreements; registered apprenticeship, pre-apprenticeship, union-affiliated training programs, or other recognized skill certification programs;
- Targeted and local hiring;
- Prevailing wage standards; and





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- Additional wage standards that ensure workers get paid family-sustaining living wages and benefits.

Facilities should also use CBAs and community workforce agreements that increase economic opportunities for communities and local workers—especially for people of color and low-income communities.

### 3. DOE's "Environmental Justice" Principle has been initially drafted as:

*Environmental Justice* – Through all phases of carbon management deployment—including siting, design, operation, and decommissioning—project developers will pursue fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income. Project developers will embrace environmental justice principles and comply with Federal requirements and guidance on these issues. In particular, project developers will consider the cumulative impacts on communities hosting carbon management projects.

This Principle should be revised and expanded upon as suggested below.

***Environmental Justice*** –The buildout of carbon management technology and its associated infrastructure must ensure an equitable distribution of benefits and risks and avoid recreating or exacerbating environmental injustices by forcing low-income communities and communities of color to bear undue and disproportionate environmental burdens and community risks from inequitable siting practices, inadequate air and water quality standards, and unenforced worker and community protections. To faithfully avoid recreating or exacerbating these injustices, carbon management technology must not increase or intensify-climate emissions and air pollution in fenceline communities and should instead reduce it to the greatest extent possible. This can be aided by ensuring that early and ongoing community engagement is a core tenet of the development of projects. To that end, project developers will ensure specific and intentional avenues of consultation are created for fenceline communities.

The equitable and sustainable buildout of carbon management infrastructure will be vital to ensuring positive project outcomes as well as the long-term success of these technologies. Through all phases of carbon management deployment—including siting,





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design, operation, and decommissioning—project developers will pursue fair treatment and meaningful involvement of all people regardless of race, ethnicity, color, national origin, religion, or income. Project developers will embrace environmental justice principles and comply with Federal requirements and guidance on these issues. This includes taking into account the environmental and health impacts that burden fenceline communities with disproportionate air, water, and land pollution risks. In particular, project developers will attempt to maximize benefits and minimize risks for fenceline communities and include protections for affected communities in all proposal plans.

The economic benefits of deploying carbon management can and should be intentionally directed toward low-income communities, communities of color, and communities enduring deindustrialization, energy transition, or environmental injustice, and these communities must be allowed to negotiate tangible benefits before hosting carbon management infrastructure. We offer the following guidance in defining these communities:

- Environmental justice communities: Government tools such as the U.S. Council on Environmental Quality’s Climate and Economic Justice Screening Tool (CEJST), EPA’s Environmental Justice Screening and Mapping Tool (EJSCREEN), and state-specific environmental justice screening tools should be used to help identify environmental justice and other disadvantaged communities where the project benefits should be concentrated.<sup>5, 6</sup>

When new facilities are proposed for construction at greenfield sites, such as a proposed DAC plant, developers should demonstrate how they will provide disadvantaged workers with improved access to career opportunities to the new, additional jobs that are to be created. This may include:

- Requiring or incentivizing local or targeted hire or other hiring and procurement policies that benefit dislocated workers, low-income communities, people of color, and/or women in disadvantaged communities, as identified by CEQ’s screening tool or DOE’s mapping tool;

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<sup>5</sup> Council on Environmental Quality, Climate and Economic Justice Screening Tool, 2022. Available online: <https://screeningtool.geoplatform.gov/en/#3/33.47/-97.5>

<sup>6</sup> EPA, EJScreen: Environmental Justice Screening and Mapping Tool, 2023. Available online: <https://www.epa.gov/ejscreen>



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- Requiring or incentivizing community benefit/community workforce agreements that increase economic opportunities for communities and local workers—especially for dislocated workers, people of color, and low-income communities;
- Creating and compensating a community task force to monitor and enforce a local hire provision or community benefit/community workforce agreements;
- Requiring or incentivizing pre-apprenticeship opportunities that are linked to registered apprenticeship programs and that target disadvantaged communities;
- Integrating training programs with community-based “wrap around” services to maximize retention of disadvantaged and underrepresented workers as they enter careers (e.g., childcare services and transportation); and
- Identifying existing community networks for the recruitment of disadvantaged workers.

Diversity, Equity, Inclusion, and Accessibility (DEIA) planning can help ensure that projects are planned with equity embedded in the design and implementation. This includes ensuring that projects support underrepresented groups and businesses and that impacts on communities are taken into consideration in project design. Developers will create a DEIA plan that describes the actions they will take to advance equity, including fostering a welcoming and inclusive environment; supporting people from underrepresented groups; and encouraging participation by and partnership with minority-serving institutions, minority business enterprises, minority-owned businesses, woman-owned businesses, veteran-owned businesses, Tribal colleges and universities, community-based groups, faith-based organizations, or entities located in an underserved community.

#### 4. DOE’s “Environmental Responsibility” Principle has been initially drafted as:

*Environmental Responsibility* – Project developers will thoroughly evaluate and mitigate environmental impacts using best practices with respect to planning, implementation, monitoring, and closure. Project developers will publish environmental impact analyses and project monitoring data in a way that is timely and easy for the public to access. Environmental analysis will include energy use and life-cycle environmental impacts—including greenhouse gases (GHGs)—to ensure that projects meet their intended emissions reduction goals.

This Principle should be revised and expanded upon as suggested below.



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***Environmental Responsibility*** –Project developers will thoroughly evaluate and mitigate environmental impacts using best practices with respect to planning, implementation, monitoring, and closure. Project developers will publish environmental impact analyses and project monitoring data in a way that is timely and easy for the public to access. Environmental analysis should include energy use and life cycle environmental impacts, including greenhouse gases (GHGs), sulfur dioxide, nitrogen oxides, particulate matter, amines, and any other relevant pollutants to ensure that projects are operating responsibly. Project developers will evaluate their potential to avoid or reduce air, water, and land pollution—particularly pollution that would impact or has impacted environmental justice and other fenceline communities.

Project developers will abide by environmental safeguards to ensure underground injection sites for carbon are thoroughly monitored and subject to sufficient government oversight, pipelines are safely operated and thoroughly monitored, climate and health-harming emissions are significantly reduced over the life of the project, and response plans exist to ensure environmental safety. The transport and storage of captured carbon should be deployed responsibly and reflect substantial community engagement; protection for water, land, and other natural resources; and accounting for environmental justice concerns. Where captured carbon is permanently stored underground, injection sites must have safeguards in place to ensure wells, underground sources of water, and surrounding communities are protected and to prevent against atmospheric releases of stored carbon. The underground storage of CO<sub>2</sub> must be monitored and the safety record of existing carbon injection wells operating without incident must be maintained as new wells come online with the sole purpose of permanently injecting and storing captured carbon deep underground, and developers must provide legal certainty defining liable parties for damages associated with any leaks.

Strong safety regulations for CO<sub>2</sub> pipelines and Class VI wells are crucial for the protection of communities, workers, and the environment. With strong monitoring, inspection, and safety procedures, the risk of pipeline ruptures and well leaks can be significantly reduced, and the impact of safety incidents can be promptly mitigated.

5. DOE’s “Health and Safety” Principle has been initially drafted as:



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*Health and Safety* – Project developers will site, design, construct, and operate their projects in a safe and secure manner that is protective of human health, including worker and public health and safety.

This Principle should be revised and expanded upon as suggested below.

***Health and Safety*** –Project developers will site, design, construct, and operate their projects in a safe and secure manner that is protective of human health, including worker and public health and safety.

Strong health and safety standards will protect workers inside the fence line of facilities, communities outside the fence line of facilities, and people working on and living next to all carbon management infrastructure. Project developers' plans should be accessible to workers and their representatives and include evidence of a safety and health program that is or will be designed and implemented with workers and their representatives that adheres to all relevant U.S. Occupational Safety and Health Administration (OSHA) regulations and includes a comprehensive analysis and management plan for all risks.

These plans should address:

- How hazards will be identified and controlled how open communication about safety and lessons learned will be encouraged;
- How workers will be protected from harassment and discrimination;
- How retention rates will be measured, and
- How worker and workplace concerns will be addressed.

Appropriate protective safety standards provide an opportunity for high-skilled jobs, environmental stewardship, and the public to align for a more sustainable society.

6. DOE's "Transparency" Principle has been initially drafted as:

*Transparency* – Project developers will implement robust mechanisms for transparency—before, during, and after the project ceases. In particular, project developers will ensure that the siting process is open to public input and transparent with respect to how decisions are made. Project developers will work with communities to identify the types of data that will be collected and shared with the public, including the level of detail, frequency of monitoring and reporting, response to findings, and means of disseminating information.



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This Principle should be revised and expanded upon as suggested below.

**Transparency** – Project developers will implement robust mechanisms for transparency—before, during, and after the project ceases. In particular, project developers will ensure that the siting process is open to public input and transparent with respect to how decisions are made.

As detailed above, companies' plans should include an analysis of the impacts of their proposals, including potential benefits and risks to communities and the environment. These should include clearly defined community and workforce benefits in the form of emissions reductions, good local jobs, local revenue, training pathways, improvements to local infrastructure, and a means of avoiding zero-sum conflicts with these communities around water, land, energy use, and impact on air quality. All promised benefits should be measurable, verifiable, enforceable, and—wherever possible—turned into legally binding agreements promising to deliver upon promised benefits.

#### **5) How could Phase 2 and a recognition program be structured and executed to maximize adoption of the Principles?**

Phase 2 and a recognition program could be implemented in coordination with the parameters of DOE's carbon dioxide removal purchasing program as laid out in [Notice of Intent No.: DE-FOA-0003081](#). In their procurement of CDR, DOE can commit to prioritizing purchases from companies that have agreed to adopt the Responsible Carbon Management Initiative Principles. This would offer long-term demand certainty to the best actors in the CDR field while simultaneously incentivizing all to adopt the Principles. As another option, DOE could utilize these principles to sort projects into tiers on how well they meet these high road principles for use in scoring funding applications. This would provide projects with feedback on areas for improvement.

#### **Conclusion**

These Principles will represent an important step that project developers should take to express their commitment to these bedrock practices of responsible operation. To effectively incentivize a just and equitable carbon management industry that maximizes



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environmental, worker, and community benefits, DOE should take all opportunities at their disposal to prioritize project developers who adhere to the Principles for federal grants, loans, and other forms of government assistance. DOE must work across agencies to ensure project developers are strongly incentivized to adopt the Principles, and DOE should ensure their strict adherence once adopted.

Developing carbon management responsibly can support good, family-supporting, union jobs across the full value chain of projects—from domestic manufacturing supply chains to construction to operation and maintenance. Principles that include strong protections and tangible benefits for workers, communities, and the environment as laid out above can help the United States continue to lead in the equitable scaling of a carbon management industry. If implemented effectively, these Principles can become part of a new bedrock of standard practices for the carbon management industry.