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Carbon

Business Council

Acting Director Kelly Cummins US Department of Energy Office of Clean Energy Demonstrations Email: <u>DAC-RFI-OCED@hq.doe.gov</u>

Re: Response to Request for Information (RFI) regarding Opportunities to Support Mid-Scale Commercial Direct Air Capture (MSC DAC) Demonstration Facilities (DE-FOA-0003333)

Dear Acting Director Cummins,

Thank you for the opportunity to respond to your February 29, 2024 RFI regarding opportunities to support MSC DAC demonstration facilities. The <u>Direct Air Capture Coalition</u> (DAC Coalition) is a global non-profit organization consisting of over 110 companies, civil society groups, and research and academic institutions located around the world working together to advance and accelerate the responsible development and deployment of direct air capture technology to help address climate change. We are responding in partnership with the <u>Carbon</u> <u>Business Council</u>, a nonprofit trade association of more than 100 innovative carbon management companies with over \$16.5 billion in combined assets working across six continents.

Below are responses by categories noted in the RFI.

#### Category 1: Questions for all respondents

1. Are DOE's views on the need for public funding to support mid-scale DAC facilities generally accurate? Please provide a yes or no answer and elaborate on the reason.

Yes, we agree strongly with the DOE's views about the need for public funding to support mid-scale DAC facilities.

Companies typically follow a phased DAC commercialization strategy that includes stages from prototype development to commercial projects. Public funding is vital in the mid-scale stage, which serves as a critical juncture for de-risking DAC technology and proving financial viability for larger scales. Without such support, enabling and accelerating a diverse array of DAC projects necessary for significant climate impact is considerably more challenging due to high capital costs and financing challenges at the mid-scale commercial unit level.

Regarding timing, the next 12-18 months are critical for mid-scale facilities to advance. Public funding during this period can provide the operating experience needed to de-risk and reduce costs for larger commercial projects, aligning with the goal of achieving megatonne-scale operations by 2030.

The financial challenges of transitioning from small pilot projects with costs under \$5 million to larger projects exceeding \$100 million are significant. DOE support can mitigate these risks, making the pathway to scale-up smoother for companies, investors, and other stakeholders.

Funding for mid-scale DAC demonstration facilities could bridge the existing gap between the large-scale projects targeted by the Regional DAC Hubs FOA and the smaller pilot facilities. Such support is not only complementary to existing DOE programs and private sector efforts but essential for enabling the progression of DAC technology from pilot scale to commercial viability. Funding for mid-scale commercial (MSCDAC) would enable DOE to meet its expressed goals to create DAC Hubs at 1m tons per year (TPY) with a wide range of DAC technologies. Given the scale gap between current pilots and the 50,000 TPY minimum in DAC Hubs, MSCDAC facilities costing in the \$30-100M range are usually beyond the scale of typical venture investors and too small for project finance. Further, there is currently more technical and market risk involved in MSCDAC than typical private investors will bear, especially in the current venture capital environment, which is more challenging than when the DAC Hubs program was conceived. MSDAC funding would alleviate that pain point.

#### 2. Has DOE accurately reflected the description of a mid-scale commercial (MSC) DAC facility?

There are multiple and well-reasoned viewpoints regarding what constitutes a "mid-scale commercial" facility but overall alignment across the industry that the program should be designed to be as maximally accessible as possible.

While we believe that DOE has for the most part accurately reflected the description of a MSCDAC facility, we feel there is strong rationale for expanding both the upper and lower bounds of the stated size thresholds (5k TPY - 25k TPY). In order to make the program as maximally accessible to developers looking to build mid-scale commercial facilities, we would encourage DOE to consider integrating greater flexibility into the eligibility criteria for what constitutes a MSCDAC project. On the upper bound, a 25,000 TPY threshold may in certain instances not quite capture the full size that a mid-scale developer may be seeking to pursue, and therefore cause companies to downscale projects to qualify. Concurrently, lowering the starting point down to 3k TPY would better reflect where many companies currently are in their scaling trajectories. A 3k - 50k TPY range also eliminates the gaps, as reflected in Figure 1 of the RFI which defines large-pilot scale as 0.5k - 3k TPY, and hub scale as greater than 50k TPY, thereby allowing for maximal inclusivity.

Ultimately, the goal should be to find a size that would allow for a DAC company to produce a facility at reasonable scale that would somewhat approximate the final form factor of a larger-scale facility. Expanding the bounds of this program would serve to provide more flexibility for companies as they move forward with larger deployments to take the step sizes most appropriate for their technology and design. Additionally, the DOE should prioritize funding for projects that are capable of scaling up from this initial footprint to become larger hub-scale facilities that tap economies of scale and leverage the infrastructure supported by this proposed funding.

Even assuming the ability to obtain unlimited low-cost capital (which is unlikely), there will be a balance of wanting to achieve the benefits of scale and get credits locked down while avoiding lock-in of initial technology that is more expensive, less efficient, and cannot capture as much  $CO_2$  in the beginning years of a DAC company's existence. Thus, it is likely that many companies will seek to do a midscale commercial demonstration in the 3 - 50k TPY range. In addition, to the extent a given facility provided a final form factor, a scaleup of 20x (vs. 10x) would seem to be well in line with acceptable industry practice – which would mean even a 3k TPY facility would represent a significant milestone en route to a scale-up to 50k TPY (and above).

3. Does DOE's estimate of \$3,000 - \$5,000 of capital expense per ton of nameplate capture capacity accurately reflect the cost of developing MSC DAC facilities? Please provide a yes or no answer and elaborate on the reason.

The heterogeneity within DAC should not be understated and a wide variety of innovative methods are being researched, developed, and deployed. RMI's recent Applied Innovation Roadmap for CDR details 10 broad approaches to DAC based on capture mechanism and release/regeneration driver.<sup>1</sup> Even within each of these categories, there is considerable diversity in the technologies being pioneered. Given the panoply of DAC methods, technology developers are likely to see a range of costs at different levels of scale, as well as a range of scales wherein facilities become commercially viable. As such, there is not a one-size-fits-all for DAC facilities and the ultimate goal is to lower costs and responsibly and effectively remove CO2 from the atmosphere.

Based on feedback from a number of DAC technology developers, DOE's estimate of \$3,000 - 5,000/ton and \$15 million to over \$100 million to build the facility appears to understate the likely cost of some of these facilities (particularly at the lower-volume end of the range). We believe that many DAC companies will have costs that start at \$5,000/ton – and then rise to as much as \$7,500 - 10,000/ton – for facilities at the lower end of the size range – though they may well come down toward materially lower cost at the top end of the size range. In general, this is because economies of scale have not yet been reached at these volumes, and projects of this size

<sup>&</sup>lt;sup>1</sup> <u>https://rmi.org/wp-content/uploads/dlm\_uploads/2023/11/applied\_innovation\_roadmap\_CDR.pdf</u>

need to be built in order to move down the cost curve. Moreover, high costs are directly related to the challenge of matching balance of plant (BOP) requirements with DAC capacity in the MSC range. Depending on the destination of the CO2 captured by an MSCDAC facility, the cost of the required BOP can substantially increase e.g., if the DAC CO2 is being used to inject into low-carbon concrete being manufactured at a third-party site, additional liquefaction, storage, and transportation equipment may be required.

It is also important to consider cost/ton figures should be inclusive of costs beyond simply the cost of capture itself. Including the full range of costs, from OPEX to transportation to sequestration, among others, provide a more robust and accurate understanding of the cost of these facilities.

# 4. Has DOE accurately reflected the challenges related to financing MSC DAC facilities? Please provide a yes or no answer and elaborate on the reason.

Yes, the vast majority of DAC companies will be challenged to find sufficient private capital to fund a MSCDAC facility. Thus, the DOE's assistance for MSC facilities could be especially critical to provide a substantial amount of non-dilutive capital to help catalyze funding of the MSC project by de-risking private investment or debt. To the greatest extent possible and practicable, prompt review, award, and finalization of contracts should be prioritized.

# 5. Has DOE accurately reflected the challenges related to finding and accessing storage and utilization for MSC DAC facilities? Please provide a yes or no answer and elaborate on the reason.

Yes. First, most Class VI wells need a minimum CO2 volume greater, or significantly greater, than what would qualify as an MSC facility to open, and face significant upfront insurance and bonding costs. Thus, most Class VI well operators are relying on point-source  $CO_2$  to provide the volumes necessary to open and are not depending on DAC projects. DAC is seen as having potential years down the road, but in the near term, most Class VI well operators are not factoring DAC into their profit models. Second, as the DOE points out, volume for utilization, including in concrete and fuels, while growing, remains low. Thus, finding an offtaker, via either permanent sequestration or utilization pathways, remains one of the biggest challenges to scaling DAC and building MSC facilities.

The limited number of operational Class VI wells, lengthy permit approvals, slow project development timelines, and minimum volume commitments (or extremely high per-tonne cost at lower volumes) compound the difficulty of securing storage solutions. Moreover, the evolving business models and the nascent stage of many carbon utilization providers add layers of complexity to establishing productive partnerships.

### 6. Has DOE accurately reflected the challenges related to siting and operating MSC DAC facilities? Please provide a yes or no answer and elaborate on the reason.

Yes. See answer to Q5. The other challenge is finding affordable zero-carbon energy. OCED should synergize this program with existing support mechanisms for clean energy production to guarantee clean energy to MSC DAC facilities to site in ideal locations. For example, if a company is receiving significant solar PTCs, some of the power produced could be allocated to an MSC DAC facility at competitive/wholesale prices. Additionally, significant potential synergies exist for the co-location of MSC DAC facilities with novel clean generation technologies such as advanced / enhanced geothermal and small modular nuclear (SMR) systems (which a MSC DAC facility would not be able to finance independently).

### 7. What challenges related to MSC DAC facilities were not addressed? In what ways could DOE support MSC DAC facilities that were not mentioned?

Permitting MSC DAC facilities, along with transportation and storage, presents a large challenge. We recommend that DOE provide additional technical and/or financial assistance with NEPA compliance for these projects.

Additionally, DOE does not capture the challenges with the risk of the technology up front before it comes down the cost curve - which adds additional barriers to securing funding at this stage. Once both the technology and policy framework are sufficiently mature, the financing barriers are expected to be lower due to advancements in the technology performance itself and achievements of economies of scale. However, DAC technology and project developers face challenges to demonstrate to investors the current technology and map the milestones that will be achieved over the life of the project. This applies not only to the maturity of the technology, but also the broader supply chain including contracting, MRV partners, sequestration partners, etc. The sunset of 45Q after 2035 presents another funding challenge. This adds additional risk to the project economics.

The DOE can assist with these funding challenges in two ways. First, they can continue to offer opportunities to directly purchase offtakes from these MSCDAC projects. By going into offtake contracts, the DOE provides a "customer guarantee" that can help with de-risking the project and incentivizing investment. Second, the DOE could provide cost share (along the lines discussed elsewhere in this submission) for project applicants, where they can significantly augment the amount of capital raised by the DAC provider to help meet the overall project capital required.

Further, DOE can support the challenges of matchmaking by securing the site, storage, and energy themselves before issuing FOA's for the DAC provider. This would mitigate some of the major hurdles that more nascent companies face in deploying MSC facilities (beyond

capital-raising itself, which remains a first order priority in all such projects of this type). Additionally, facilitating interagency support and collaboration to enable granting more states primacy to expedite siting and Class VI well permitting processes could be another way to reduce the matchmaking challenge by providing more options for secure, long-term storage.

Finding ways to leverage cross-cutting projects or weighting the value of cross-cutting benefits by which DAC mid-scale pilots can support the goals of other DOE projects. An example of "Cross cutting" could be between the Geothermal Technology Office (GTO) & FECM, or there are opportunities between the "Wells of Opportunity" and "Orphan Well" programs.

8. How would a future program most effectively support MSC DAC demonstration facilities? Please address total funding amount, cost share percentage, requirements for facility operational life, specific technology types, or other topics that may help further define a future DOE program.

A future DOE program aimed at effectively supporting MSCDAC demonstration facilities should prioritize comprehensive funding and support mechanisms, reflecting the unique challenges and opportunities within this scale of operation, as well as an efficient review process and timely administration of awarded funds. Given the estimated cost of \$100 million for achieving a target 25k TPY capacity, the DOE is encouraged to fund these initiatives at the highest possible level to ensure ambitious targets are feasible for participants. Reports from analysts at Rhodium Group, Boston Consulting Group, McKinsey & Company, and others all foresee investments figured in the tens to hundred of billions up to trillions of dollars in order to adequately scale DAC to the level required in order to meet net zero goals.<sup>234</sup>

#### **Total Funding Amount and Cost Share:**

- The program should aim to award between as many projects as program budgets permit, with a maximum funding allocation of \$125 million per project, based on the scale of the project submitted, specifically targeting the 3-50k TPY capacity range.

- A higher cost share percentage of 80% by the DOE is recommended for these mid-scale programs, in contrast to the 50% share in larger DAC Hubs programs. This adjustment acknowledges the difficulties in securing project or equity financing for mid-scale projects and the lack of economies of scale available to larger ventures. A limited number of DAC companies have access to capital needed for developing MSC facilities such that this cost share percentage allows for broader participation from promising DAC technology providers.

<sup>&</sup>lt;sup>2</sup> <u>https://rhg.com/research/carbon-dioxide-removal-us-policy/</u>

<sup>&</sup>lt;sup>3</sup> <u>https://www.bcg.com/publications/2023/solving-direct-air-carbon-capture-challenge</u>

<sup>&</sup>lt;sup>4</sup>https://www.mckinsey.com/capabilities/sustainability/our-insights/carbon-removals-how-to-scale-a-new-gi gaton-industry

#### **Operational Life:**

- Facilities should be designed to have an expected operational life of 10-25 years to ensure sustainability and impact. However, a minimum operational timeframe of 5 years should be emphasized, with no maximum operational life required. This flexibility allows for evolving technologies and market conditions.

#### **Technology Types:**

- The program should remain technology-agnostic, welcoming any applications classified under Direct Air Capture as defined by the DOE. This approach encourages innovation and allows DOE technical experts to evaluate applications on their merits during the review process.

#### Additional Support Mechanisms:

Support beyond funding is critical. The program should facilitate partnerships along the DAC supply chain, including site identification, connecting with renewable energy providers as well as companies with complementary power and/or heat needs, and securing offtakers. This would significantly reduce project complexity and enhance the feasibility of successful deployment.
Assistance in energy infrastructure support is crucial, including identification of developers for smaller projects, streamlining the transmission permitting process, and NEPA (National Environmental Policy Act) reviews.

- DOE should also foster connections to sequestration operators and encourage partnerships beyond general programs, offering tailored support that addresses the specific needs of MSC DAC projects.

- Continued support for public engagement in the form of templates for community benefits plans and fostering connections with relevant state and local governments, as well as with HBCUs and other MSIs.

9. What timing and frequency would be most effective for DOE to offer funding for MSC DAC demonstration facilities? (e.g., a specific calendar year, recurring offerings in multiple years, rolling applications)

We believe that the need for the MSCDAC funding is immediate and that a FOA should be released as soon as possible and be offered on a rolling basis. We expect many DAC companies to deploy prototypes in the next year which means that MSCDAC level will be achievable in the next 2-3 years. However, we think it very important to note that we do not want participation in this potential FOA to preclude any company from the TA-3 DAC Hubs program.

We recommend a substantial tranche of funding available in the next 12-18 months, though this could be segmented into 2-3 rolling rounds to incentivize participation.

10. Are there more effective ways DOE could support the direct air capture field that would be

#### higher priorities than MSC DAC facilities?

We agree that the DAC Hubs program and funding the deployment of MSCDAC facilities will be the most significant ways that the DOE could support this field in 2024, to allow for near-term deployments, additional operational experience, and therefore learnings that will enable large scale projects at lower costs in the future. DOE should also continue to prioritize the TA-3 program to maximize opportunities to companies at different stages of technical readiness.

Additionally, establishing and standardizing LCA guidelines for DAC evaluation would provide clarity and consistency in assessing the environmental impact of DAC technologies.

Incorporating MSCDAC projects into the recently announced DOE Voluntary CDR Purchasing Challenge would also be significantly catalytic in terms of providing supply-side support for these projects.

Introducing financing mechanisms for first-of-a-kind facilities, especially for projects perceived as riskier, would help overcome the initial financial hurdles of deploying novel DAC technologies.

A multifaceted approach that includes technical assistance, market integration, liability protection, standardization efforts, federal procurement, innovative financing mechanisms, and support for carbon credit markets would provide a more comprehensive and effective framework for advancing the DAC field. These strategies collectively address both the technological and economic challenges faced by DAC projects.

11. Would it be advantageous for DOE to fund shared facilities offering DAC developers access to clean energy and CO2 offtake, where a mid-scale facility could be built, in lieu of funding that directly supports the DAC facility's development and construction?

Yes. Providing MSCDAC facilities access to low-cost renewable energy and storage would be advantageous as it would allow companies to focus on operationalizing DAC technology. However, deployment capital availability is the biggest challenge facing developers at this point in time and should be the DOE's top priority. However, ideally, the DOE could find a way to support both in some measured capacity.

#### Category 2: Questions for DAC technology or project developers only

15. Would you plan to list this project on the DOE's Carbon Matchmaker site? If so, at what project stage would you list? If not, why not?

While the DAC Coalition and Carbon Business Council are not technology or project developers *per se*, we write to express our support for the DOE Carbon Matchmaker site on behalf of our members, many of which are technology and project developers. Given the diversity of pathways for DAC, and the equipment, chemicals and other inputs required, as well as the many, and emerging, offtake options for  $CO_2$ , we see a strong and growing need for matchmaking. We expect the DOE Carbon Matchmaker to help integrate ecosystem members across the value chain and welcome an opportunity to work with DOE to strengthen it.

#### Category 3: Questions for all respondents to answer as relevant to their role

16. In what ways, if any, do you anticipate this program could impact the workforce? For example:

Direct Air Capture brings significant economic and workforce opportunities to communities. In a <u>2023 report</u>, Rhodium Group estimates that "the construction and engineering of a DAC plant creates 1,215 annual average jobs over the roughly five-year time period it takes to build the facility. After the plant is built, we estimate there are approximately 340 jobs needed to operate the facility over its lifetime."

#### a. To what extent do you anticipate job creation, loss, or changes in job quality?

DAC creates high-quality jobs in a range of sectors, from construction and engineering to plant maintenance. Overall, DAC plants are projected to have a net positive impact in job creation according to the Rhodium report and other resources.

### b. To what extent do you anticipate the creation of construction jobs? Ongoing operations and maintenance jobs? Other jobs across the supply chain?

As stated above, we expect DAC to create jobs for a variety of skills and areas of expertise, many of which will be permanent as DAC integrates into the larger carbon management ecosystem to deliver long-term results.

17. What existing workforce education and training efforts (e.g., specific registered apprenticeship programs, labor management training programs, community college or technical school programs, etc.) are preparing workers for this industry? How can those efforts be best supported or augmented for ensure success of this industry?

Overall, there are no widely available accessible and comprehensive training or apprenticeship programs for DAC. At best, there are venues such as the DAC Coalition's website, where users can self-educate on DAC using our DAC reports resource library, and there are several online

forums for community knowledge sharing, such as OpenAir Collective and AirMiners. In addition, some universities are conducting research on DAC, but this work is performed at a graduate level and typically by only those with advanced chemical or engineering degrees. Strengthening these existing efforts and creating new ones can help spur additional workforce education and training efforts. We are particularly excited about opportunities for MSC DAC projects to collaborate with HBCUs and other MSIs, for example via programs such as DOE's University Training and Research for FECM.

# 20. In what way could scaling this industry provide opportunities for workers displaced from fossil industries and other industrial or resource-based industries in decline?

Given the translatable skills between DAC and CO2 storage offtake activities with those essential to traditional fossil fuel production, storage and transportation, and given the huge need to scale DAC in the coming years, there will be a high demand for workers currently in the fossil fuel industry or other resourced-based industries. Several of the skillsets in highest demand, such as geologic storage for CO2, are directly related to existing knowledge and skills of workers in the fossil industries.

# 21. What are the key equity-aligned review criteria that DOE should use to evaluate and select applicants for a MSC DAC program?

We suggest that the DOE remains consistent with the same Community Benefits Plan (CBP) requirements that have been included in recent carbon removal related FOAs. These plans help to ensure that DAC projects maximize community benefits and minimize risks. Additionally, continued incentivization per Justice40 for projects to be located in underserved or disadvantaged communities, including tribal communities, will help to ensure that program benefits are distributed in an equitable manner.

#### Equity, Environmental, and Energy Justice

# 22. What equity, environmental, and/or energy justice concerns or priorities are most relevant for an MSC DAC program? How can/have these concerns or priorities be/been addressed?

It is important to ensure that DAC projects maximize benefits for communities, which can take place through early engagement and two-way dialogue with a community. The Carbon Business Council released <u>CDR Responsible Deployment Training</u>, which includes an introductory online training about weaving equity, environmental, and energy justice considerations into carbon removal projects.

#### Specific points of consideration include: Priorities and concerns:

- 1. Assuring that there is two-way communication and response, meaning that project developers respond to community concerns and make decisions based upon them.
- 2. Project developers address Workforce and Community Agreement needs.
- 3. Listening to concerns, including comments regarding cumulative impacts and siting, in order address these concerns whether through education, communication, or projects adjustments.
- 4. Addressing how communities want to access or participate in creating data about the project and its impacts.
- 5. Understanding what communities and workers identify as potential benefits and determining strategies to achieve those benefits, including through Workforce and Community Agreements.
- 6. Determining any project enhancements to maximize community benefits and support; and
- 7. Understanding pathways for formal partnership with communities, including through recognized representatives or intermediaries.

23. Describe possible human health, environmental or ecological considerations, both positive and negative (e.g., are there any air quality impacts, impacts on sensitive ecosystems, impacts on communities with environmental justice concerns, other considerations) in connection with implementation of this program.

A positive human health and environmental impact is a reduction of CO2 levels in the atmosphere due to CDR technologies and projects. Projects sited in the correct manner with appropriate review would have limited, if any, impacts to sensitive ecosystems.

24. How can adverse impacts be measured or monitored, and which materials/processes/components may result in the largest environmental impact? What opportunities exist to minimize impacts?

The DAC Coalition and Carbon Business Council and our memberships are committed to the responsible deployment of carbon removal in a manner that maximizes community benefits and minimizes any risks. DAC offers substantial environmental and economic benefits. Removing ambient CO2 from the atmosphere offers significant climate benefits. We support ongoing MRV of project facilities to ensure projects are working with maximum effectiveness. Research from World Resources Institute found "that overall, DAC plants are expected to produce zero or almost zero onsite emissions that could negatively impact human health or the environment .... Solvent plants produce minimal, but non-zero, amounts of "drift losses" — aerosolized solvent droplets that can enter the atmosphere.<sup>5</sup>

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https://www.wri.org/insights/direct-air-capture-impacts#:~:text=WRI%20research%20finds%20that%20ove rall.that%20can%20enter%20the%20atmosphere.

### 25. What information do communities, Tribal or State governments, or entities/organizations need to engage with the Department on MSC DAC?

General knowledge should be shared regarding the technology, the project, and the benefits of the projects on climate considerations. There should also be information about Health and Safety and any potential risks associated with the projects and how these risks are being mitigated.

26. What benefits or opportunities could encourage local, State, and Tribal governments to consider engaging with the Department?

We agree with the Justice-40 relevant benefits that are recommended to be considered when assessing project benefits for the CBP:

- 1. Decreased energy burden.
- 2. Decreased environmental exposure and burdens.
- 3. Increased parity in clean energy technology access and adoption.
- 4. Increased access to low-cost capital.
- 5. Increased clean energy enterprise creation and contracting for Minority Business
- Enterprises/Disadvantaged Business Enterprises.
- 6. Increase clean energy jobs, job pipeline, and job training for individuals.
- 7. Increased energy resiliency.
- 8. Increased energy democracy.

28. What organizations, universities, or communities should the Department consider partnering with to develop MSC DAC?

Consideration should be given to partnering with DAC technology developers / project owners, the National Labs, local colleges and universities (particularly HBCUs and other MSIs), as well as neighboring communities. This can also be done in partnership with groups like the DAC Coalition and Carbon Business Council.

29. What are the key equity-aligned review criteria that DOE should use to evaluate and select MSC DAC?

Those which are already defined in the DOE Community Benefit Plan requirements.

30. How can OCED ensure community-based entities/organizations are engaged and included in the planning, decision-making, and implementation processes (e.g., including community-based organizations on the program/project/activity team)?

Publish general knowledge information regarding DAC and the technology. Offer opportunities (whether in person or online) for community members and groups to ask questions and share feedback and concerns while providing a feedback loop to address these comments and concerns.

31. What barriers exist, if any, for deeper economic and other engagement with communities impacted by this program/project/activity?

Accessibility issues should be considered to help make engagement as seamless and easy as possible for community members. This includes considerations like language translation if English is not the predominant language in a community, holding community engagement meetings at times that work best for the community, and other considerations.

32. DOE requires Community Benefits Plans (CBPs) as part of all BIL and IRA funding opportunity announcements. CBPs are based on four core policy priorities: engaging communities and labor; investing in America's workforce; advancing diversity, equity, inclusion, and accessibility; and implementing the Justice40 Initiative. Please give input on how CBPs for MSC DAC can support the identification and implementation of benefits to local communities, including disadvantaged communities.

Early, meaningful, and robust community and labor engagement is key to reducing risks on a project, including engagement with labor unions, Tribal governments, local governments, and community-based organizations that support or work with underserved communities.

Development of a CBP offers the project developer the opportunity to explain how the project location was chosen, what about the community makes it a good fit, such as the available workforce, local partners, natural resources, proximity to supply chain, and available land. Provide information to the community and affected group about the developers plans for education and workforce development. Also, to involve community partners in project planning to assure success.

33. Please clearly articulate, with concrete actions, how regional economic growth and its benefits will be shared with underserved populations.

Some ways in which regional economic growth experienced as a benefit of the project will positively affect the population are job creation, contracting opportunities, opportunities for

suppliers, project developers' commitment to safe working conditions and to hire local workers and workers from economically disadvantaged communities, job training and education.

37. What factors should be considered when identifying and selecting the location of the technology/project/activity (e.g., economic considerations, policy considerations, environmental and energy justice considerations, geology, workforce availability and skills, current industrial and other relevant infrastructure and storage available/repurposed/reused, industry partners, Socially Disadvantaged Businesses or Enterprises, regional specific resources, security of supply, climate risk, etc.)?

All of the above should be considered in siting a project, as well as the best location for the technology performance, energy infrastructure, and land availability.

We welcome further dialogue and look forward to hearing from you on how the DAC Coalition and Carbon Business Council can help support commercialization of DAC.

Sincerely,

Jason Hochman Executive Director & Co-Founder Direct Air Capture Coalition

Ben Rubin Executive Director & Co-Founder Carbon Business Council