# REQUEST FOR INFORMATION SUMMARY

Opportunities for operational validation of pilot-scale clean energy technology components and subsystems

February 2024

## 1.0 Executive Summary

Performance data collection and validation of a component, subsystem, or integrated system at a pilot scale is critical to catalyze the additional financing or other partnerships needed to move to the next stage of commercial demonstration; however, several industry players have expressed challenges with testing the technologies they are developing at a relevant pilot scale. Having a robust pipeline of technology solutions is also important to the Office of Clean Energy Demonstrations' (OCED) mission to deliver clean energy demonstration projects at scale in partnership with the private sector to accelerate deployment, market adoption, and the equitable transition to a decarbonized energy system.

OCED received a robust response to the Opportunities for Operational Validation of Pilot-scale Clean Energy Technology Components and Subsystems Request for Information (RFI)[1] in support of a potential small business program to fund pilot-scale projects that can catalyze future commercial demonstrations. The 83 responses received were largely from small businesses and industry trade groups representing hundreds more businesses.

The RFI respondents saw pilot projects as essential to validating, scaling, and de-risking technical and commercial aspects of a new technology before being ready for a large demonstration effort or commercialization in the clean energy infrastructure industry; and yet, they identified a gap in funding for pilot projects from both the government and private investors. The RFI respondents indicated that OCED could advance its mission with a pilot-scale projects program that de-risked and validated concepts for demonstration-scale projects to accelerate their commercial liftoff.

Respondents provided feedback on the size, scope, and other characteristics of pilot projects and a corresponding program. On average, they recommended project sizes of $10M over 3 years. They requested flexibility in program requirements and asked for non-monetary resources to help with the projects, particularly the Community Benefits Plans (CBPs) and the Diversity, Equity, Inclusion, and Accessibility (DEIA) aspects.

The summary of the feedback received is grouped into three categories:

[1] Request for Information Posting - https://oced-exchange.energy.gov/Default.aspx#FoaId6130961d-63fe-44ff-887b-0d52d11c2799

**Align the program with private industry practices** — Orienting the program towards private industry practices would prepare participants for the next phase of working with buyers, financiers, and others in the larger, clean energy infrastructure industry. Respondents asked that application and reporting materials align with private sector materials, so they could be repurposed for private industry use. Respondents suggested allowing for a broad scope in activities to match what is needed for success as companies push their technologies forward. Additionally, respondents recognized that success takes participation beyond any single entity and requested an emphasis on promoting partnerships to accelerate commercial liftoff. They requested a prioritization on stakeholder outreach, networking, and coalition building to build these connections within private industry.

**Provide non-monetary assistance and resources** — Respondents requested non-monetary assistance and resources across the different lifecycles of the program. They requested that applications be balanced by having timely decision determinations, adequate time to apply to communicate ideas, and fair reviewers. Respondents were eager to take on the important work of Community Benefit Plans (CBPs) but requested assistance in the form of expertise and resources, as they do not have specialization in this area. Overall, respondents suggested that templates and examples would be beneficial for the application, components, and reporting.

**Leverage other government and private resources** — Many existing resources should be leveraged to provide wrap-around services to support technology developers. Respondents requested connections to and help navigating other government programs (e.g., vouchers, prizes, tax credits, loans, and other grants) to receive their full benefit. They requested that OCED funds be appropriately used in a way that fully unlocks private co-funding and other buy-in. Respondents recommended the creation of a clear continuity of funding for next steps to commercialization.

Executing successful pilot-scale projects will be a difficult endeavor requiring many stakeholders to come together in advancing their thinking to de-risk the technology's implementation. Technology developers have a huge need for additional funding geared at pilot-stage project activities. Respondents recommended OCED to support pilot-scale projects and in doing so, advance its mission of delivering clean energy demonstration projects at scale.

This summary document is intended to report the main themes received by the public. OCED is not endorsing any specific recommendation nor making any decision at this time. Publication of this document does not imply OCED will move forward with this program, nor that OCED is committing to any specific action on this matter.

## 2.0 Introduction

On June 14, 2023, OCED released the Opportunities for Operational Validation of Pilot-scale Clean Energy Technology Components and Subsystems Request for Information (RFI)[2] for public

[2] Request for Information Posting - https://oced-exchange.energy.gov/Default.aspx#FoaId6130961d-63fe-44ff-887b-0d52d11c2799

response and comment. OCED sought feedback from industry, small businesses, minority-owned businesses, academia, research laboratories, government agencies, and other stakeholders on the need, size, timing, and other characteristics of potential funding for pilot projects. The funding of pilot projects could help bridge the gap between lab prototypes and demonstration projects by accelerating and de-risking technical and commercial development.

Small and minority-owned businesses have expressed challenges with testing components, subsystems, or integrated system technologies at a pilot-scale. The businesses require collection of performance data and validation of plans to catalyze the additional financing and partnerships needed to move to the next stage of commercial demonstration.

OCED's mission is to deliver clean energy demonstration projects at scale in partnership with the private sector to accelerate deployment, market adoption, and the equitable transition to a decarbonized energy system. OCED could advance its mission by supporting small and minority-owned businesses in building pilot-scale projects with novel aspects such as having larger scales, operating in industrially relevant physical conditions, containing new commercial aspects, or having other new aspects. Relevant pilot-scale projects would be situated at the stage after lab prototypes and before commercial-scale demonstration projects. The program would focus on advancing both Adoption Readiness Level and Technology Readiness Level.

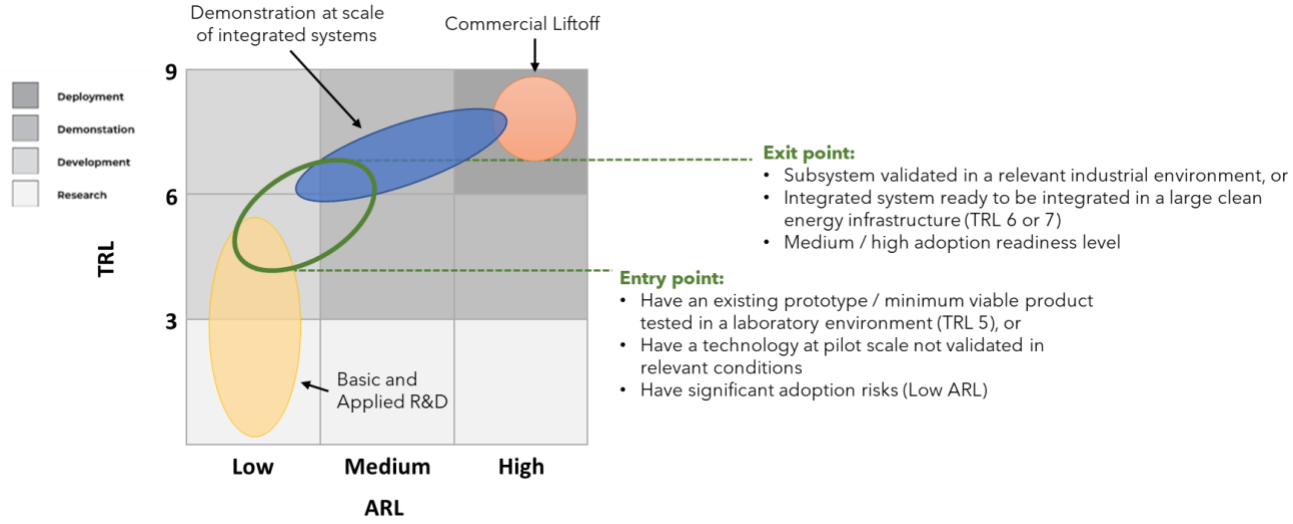



*Figure 1 - Expected entry and exit points for projects selected as part of the proposed program in a TRL / ARL map in relation to programs issued by other relevant DOE offices. This map is not meant to provide an exact description of the scope and objectives of different DOE programs and offices, but rather provide an easy visualization of the opportunities for a new program executed by OCED. For more information about the definitions of adoption readiness level, see https://www.energy.gov/technologytransitions/adoption-readiness-levels-arl-complement-trl*

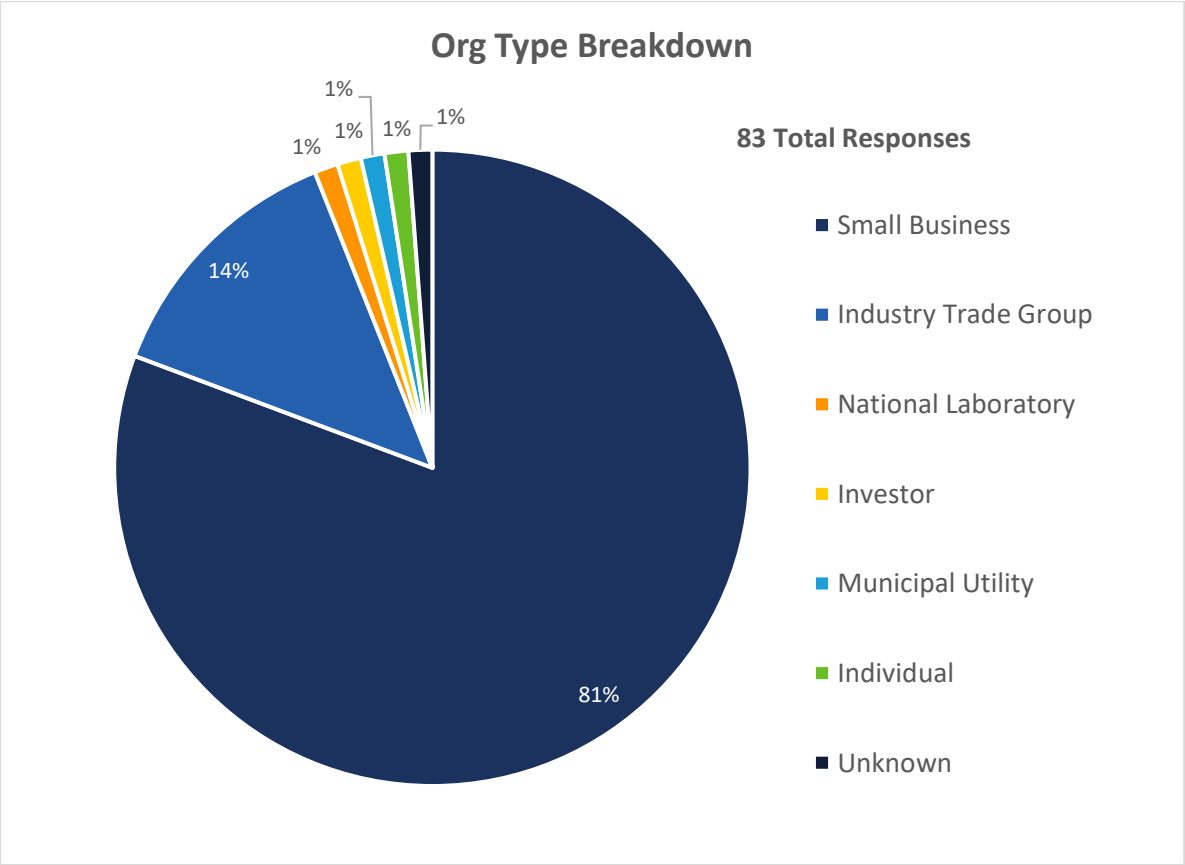
In the RFI, OCED requested input to assess the need for this type of program, learn more about variations in needs and approaches to pilot-scale projects, and receive other suggestions for the characteristics of the program. The RFI included questions across five categories:

1. Type of work and funding amount

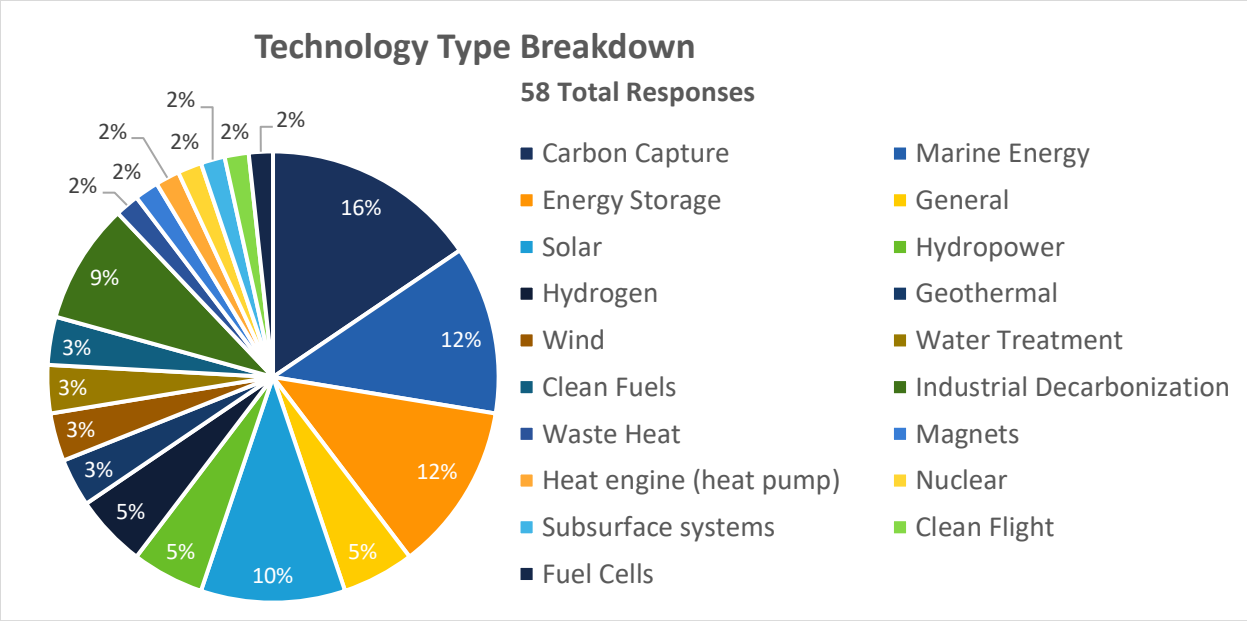
2. Funding mechanism, application process, reporting requirements
3. Community benefits planning
4. Technical, business, and commercialization assistance
5. Diversity, equity, inclusion, and accessibility

Please see Appendix 5.1 Questions Asked, for a full list of questions.

A total of 83 responses were received primarily from small businesses (81%) and industry trade groups (14%) who in return represent hundreds of companies.




The entities represented were diverse in focus with 19 distinct technology types represented.




Please see Appendix 5.2 Respondent Profiles, for more information on respondent profiles.

All of the responses indicate a substantial need for funding to small and minority-owned businesses for pilot-scale projects across technologies.

This report presents the top 10 key findings as:

1. Align application and reporting materials with private sector materials
2. Prioritize stakeholder outreach and coalition building
3. Be broad in scope of allowable activities
4. Promote partnerships to accelerate commercial liftoff
5. Provide help with CBPs
6. Create a balanced application package
7. Provide templates and examples
8. Provide connections to and help in navigating other government programs
9. Use OCED funds to unlock and leverage private co-funding and other buy-in
10. Create continuity of funding for next steps to commercialization

Section 3 of this report breaks down the findings in each of the five question categories in more detail. These learnings would be used to provide more specific details to the program design.

# 3.0 Key Themes

OCED analyzed the responses to identify common themes of suggestions. The RFI respondents communicated the following main themes.

## 1. Align application and reporting materials with private sector materials

In line with preparing technologies for private investment, respondents suggested OCED require application and reporting materials that match the type and format of what's required in the private sector, especially to ease the burden on small and minority-owned businesses. Example materials and activities might include pitch decks, white papers, financial pro forma models, engineering designs, or giving pitch presentations. Companies are (or should) already be preparing these documents for other stakeholders as they grow and pitch their ideas; therefore, requiring similar materials reduces the burden on businesses.

## 2. Prioritize stakeholder outreach and coalition building

Respondents asked OCED to prioritize stakeholder support beyond the direct team by building coalitions of investors, buyers, suppliers, service providers, and advisors. At the pilot-scale project stage, a group of stakeholders is required to push technologies forward. Respondents suggested requiring a certain amount of outreach, providing matchmaking tools, and hosting networking platforms. Technology developers would gain commercialization discovery, outside support, and outside validation by connecting with a wider group of stakeholders.

## 3. Be broad in scope of allowable activities

Technology developers need to perform a wider breadth of activities at the pilot-scale stage as compared to the lab prototype stage. Private investors and other public grantors won't fund certain activities that need to happen. Respondents wanted OCED to help enable success by allowing and promoting a broad range of activities that go beyond technical development. These activities include testing, certification, permitting, business operations, business development, legal work, and fundraising.

## 4. Promote partnerships to accelerate commercial liftoff

Respondents suggested promoting partnerships with experts, mentors, test sites, investors, buyers, developers, EPCs, communities, and suppliers. At this stage, multiple stakeholders are needed to advance a technology. Multiple stakeholders cooperating provides better validation of ideas, success during the execution phase, and provides options for next steps at the exit phase.

## 5. Provide help with CBPs

While respondents recognized the benefits of CBPs, respondents asked for assistance in designing and executing effective and impactful CBPs that were sized appropriately to the stage of development of their small business. They were concerned about their ability to plan and execute a CBP due to lack of expertise, examples, and resources as a small business.

Many small and minority-owned business technology developers are unfamiliar with how to design or execute CBPs and see this work as outside their expertise. They would look for OCED to provide support in the form of templates, examples, experts, or community connections. OCED FOAs to date have included tailored CBP Guidance documents to provide additional information to applicants on how to create a strong CBP.

## 6. Create a balanced application package

Respondents asked that the application be balanced in size and structure to leave ample opportunity to convey information without overly burdening applicants. Applicants need to know award results in a timely manner to be able to make business plans. At the same time, reviewers should have enough time to fairly evaluate the application with enough time to adequately understand the idea and ask any follow-up questions. In addition, respondents were strongly supportive of concept papers that could eliminate time spent on unmeritorious full applications and increase the likelihood of selection if a full application were undertaken due to the opportunity for feedback.

## 7. Provide templates and examples

Respondents asked for templates and examples that could help guide quality applications. Applicants would better understand what's needed in the application and what makes for a good application with these resources. Applicants tackling new requirements such as CBPs would especially be helped by these resources. Applicant writers could potentially produce higher quality applications by focusing on content and not having to spend time on producing new templates if the application process were simplified, streamlined, and standardized. Reviewers could more easily find information in submissions with the use of standardized templates.

## 8. Provide connections to and help in navigating other government programs (e.g., vouchers, prizes, tax credits, loans, and other grants)

Respondents asked for connections to and help navigating other programs relevant to their work. There are many other government programs (e.g., vouchers, prizes, tax credits, loans, and other grants) that combined can provide more comprehensive support than any one program. However, it is difficult to familiarize oneself with them all and understand fit, timing, and applicability. This assistance could include navigation help, education on complementary programs, introductions to other DOE offices, or introductions to other experts.

## 9. Use OCED funds to unlock and leverage private co-funding and other buy-in

Respondents suggested leveraging the physical systems that are being built as an asset to gain further support. Teams can use the physical systems as an asset by showcasing them to potential buyers and investors, using them as collateral to unlock debt funding, or using them as a means to additional revenue from ongoing operations after the project.

Applicants were concerned about the ability to fully make use of assets with certain funding mechanisms and would need clarity at the onset on the details of the government's interest in the assets at the end of the project under different scenarios. Leveraging the systems being created could multiply OCED's funding impact.

### 10. Create continuity of funding for next steps in commercialization

Respondents were concerned about what happens after the end of a pilot-scale project. Many had experienced intermittency in funding - with significant gaps between when different grant or financial assistance programs start and stop which impedes commercialization efforts. They suggested that OCED provide continuity of support or off ramps in the transition to full commercial scale, after the pilot-scale projects end to fully realize their market liftoff potential. Participants would be looking for support in understanding how to transition to DOE's Loan Programs Office (LPO), information on opportunities for further government funding, connections to private sector financing, and support in matching them with potential buyers of their technology, services, and products. All this support would help the technology smoothly scale to the next level.

## 4.0 Category Findings

A more detailed response breakdown is provided for each question category. These findings provide further detail to the main themes above.

### Category 1: Type of work and funding amount

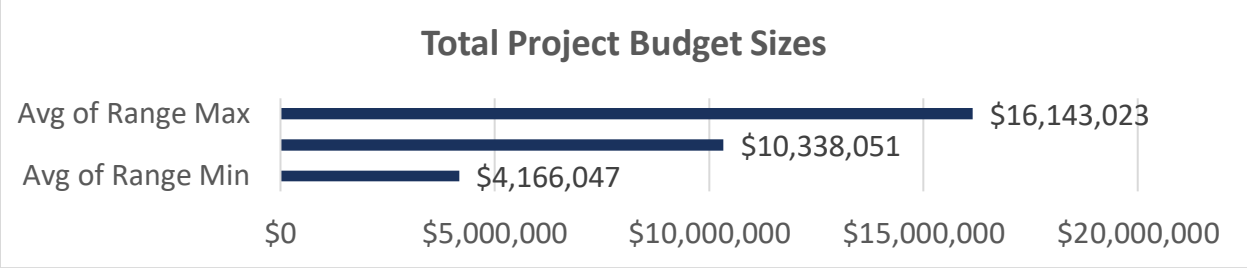
In this category, OCED asked four questions focused on the challenges, needs, timing, funding amount, and structure of the program. Respondents focused on the current gap in funding for pilot projects, the need for program activities to go beyond technical development, and the need for flexibility in program design. Respondent's average recommended total project size was $10M over 3 years.

**A program for pilots would fill a funding gap** — Respondents communicated that the core challenge for pilot projects was the lack of funding from other grants and private investors for pilot-scale activities. The next stage of investors, buyers, and partners need validation and data of the technology in new environments, at larger scale, or with new commercial connections, but there's restricted funding for the types of activities needed to get this information, especially for small and minority-owned businesses. Technology developers suggested funding activities that would improve efficiency, increase quality, reduce costs, integrate components, reduce complexity, or prove out commercial aspects.

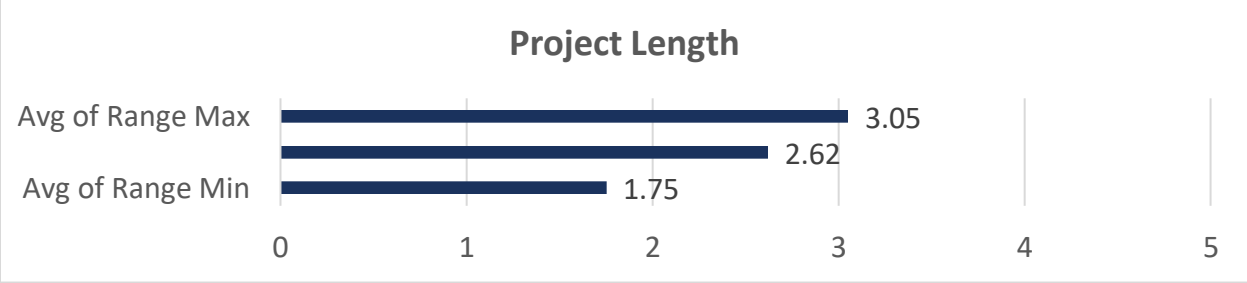
**Fund key activities that go beyond technical development** — Respondents suggested funding activities that go beyond technical development. Such activities include establishing consumer demand, overcoming regulatory hurdles, navigating permitting, submitting patents, engineering systems, designing for the market, executing tests, and networking/building business partnerships.

**Prioritize flexibility** — Respondents asked for flexibility on a few different aspects of the program. They wanted flexibility in the application format, in the reporting materials, and in what could be funded. Program awardees would more easily be able to assemble materials and make better project decisions with greater program flexibility.

**Average recommended project sizes of $10M over ~3 years** — Respondents estimated total needed project costs ranging between $4-16M with their estimates averaging $10M.




Respondents estimated project lengths to last between 1.5-3.0 years with their estimates averaging 2.6 years.




## Category 2: Funding mechanism, application process, reporting requirements

In this category, OCED asked seven questions focused on the funding mechanism, application, review process, and reporting requirements. Respondents primarily wanted flexibility, speed, and fairness in the application process and the funding mechanism.

**Leverage built systems** — In addition, respondents wanted to make sure that physical systems built could be fully utilized as an asset to gain further support. They wanted to be able to leverage the system as collateral for debt, showcasing to potential customers or investors, and for use in ongoing operations. Applicants were concerned about the ability to fully make use of assets with certain funding mechanisms and would need clarity at the onset on the details of the government's interest in the assets at the end of the project under different scenarios. They said that there is not a lot to lean on at this stage to bring in funding or gain buyers and wanted to make full use of every available asset.

**Match materials with private-side formats** — Respondents asked for application formats that mimic materials used in private industry. They wanted materials such as pitches, pitch decks, white papers, and financial pro forma models to be used for the application.

**Include concept papers in the application to not waste time** — Respondents were strongly supportive of concept papers with 88% of respondents in favor of including a concept paper in the application (Appendix 5.4 Concept Paper). Applicants could minimize the time spent on a full application and increase their likelihood of selection if a full application was undertaken with concept papers. Respondents also saw concept papers as an opportunity for feedback which could help improve the proposal, clarify the application, and progress the technology. Additionally, respondents focused on the need for a speedy process with quick responses balanced with a fair evaluation that allows for full understanding of the idea. So overall, applicants would have a positive application process with an application that includes concept papers, is fast but fair, and provides feedback.

**Clear selection criteria that match program goals** — Respondents requested that OCED make clear the criteria used for selection. Respondents suggested that applications should be evaluated based on the criteria of technology readiness, societal and environmental impact, team ability to execute, commercial applicability, and proven partnerships. Overall, respondents requested that OCED make it very clear what it's looking for from applicants in terms of technology type, stage, and risk appetite.

**Require quarterly reporting** — Respondents predominantly (79% as shown in Appendix 5.5 Reporting Frequency) requested a quarterly report cadence. They suggested that quarterly reports would provide the appropriate balance of not being overly burdensome while still providing ample opportunity to convey information. They viewed reporting as a necessary burden to surface risks, head off problems, and receive help and feedback.

Overall, respondents asked for processes that are less burdensome, more flexible, and more in-line with private-side practices.

## Category 3: Community Benefits Planning

In this category, OCED asked three questions focused on resources needed, issues to be faced, and entities needed in the design and execution of a Community Benefits Plan. Overall, respondents saw planning and carrying out CBPs as a large challenge for which they were looking for additional help.

**Provide resources for CBPs** — Respondents were looking for assistance with CBPs in the form of advising, examples, templates, and monetary resources. They listed challenges of lacking experience with CBPs, not knowing best practices, not having legal advice on regulatory affairs, difficulty getting consistent community commitment, not being able to get private investor funding for CBP planning, having uncertainty in CBP scope, and not including CBP work in the scope of the company. Respondents were looking for any support that could help overcome these challenges and carry out a successful CBP.

**Help participants connect with community partners** — Respondents asked for help in connecting with community stakeholders. They suggested a wide range of organization types to reach out to and work with when planning and executing CBPs. A list of these entity types is included in Appendix 5.6 Community Benefits Planning Entity Types. Respondents asked for help connecting with organizations in the form of providing matchmaking services, making introductions, or giving access to databases.

**Recognize the benefit of starting on CBPs early on** — Respondents recognized the opportunity of including CBPs at an early stage. Smaller companies at the earlier stage can find it easier to connect to communities than larger, more established businesses. One respondent noted, "Practically, startups are much more likely to implement CBP as part of their core ethos vs. large established companies". Respondents recognized the opportunity to instill these ideas early on in a company's culture to make use of CBPs most effectively.

Respondents provided other ideas relating to CBPs including using community engagement as in-kind cost-share, matching CBP scope to the project's scale, and having a third-party liaison moderate between the technology developer and communities. Additionally, the range of community organizations presents an opportunity for the abundance of potential partners.

## Category 4: Technical, Business, and Commercialization Assistance

In this category, OCED asked questions on the technical, business, and commercialization aspects of pilot-scale projects. Respondents emphasized the importance of receiving support, making allowable expenses flexible, and assisting with post-project off-ramp steps.

**Provide expertise and support** — Respondents requested support in the form of expertise (e.g., project management, engineer, market analysis, or financial capabilities), facilities or pre-permitted land, case studies on common problems, or connections with relevant government, regulatory, and national laboratory organizations. Respondents recognized the limits of their expertise and the fact that new expertise is required to take on new challenges.

**Be flexible with allowable expenses** — Respondents were looking for flexibility in what expenses would be allowable. Respondents said that there would be a wider range of activities that would need to happen than what takes place at the lab prototype stage. Technology developers might be performing activities related to testing, certification, or commercialization.

**Assist with post-project off-ramps** — Respondents were concerned about what would happen after the end of the project. They requested assistance with post-project off-ramp opportunities. They suggested ideas of holding events to publicize results from pilot-scale testing, providing help with legal documents, helping identify requirements from banks, investors, or off-takers, and assisting in understanding how to reach LPO support.

Overall, respondents recognized that the breadth of activities that would be needed at the pilot-scale stage and the assistance they would need in carrying out these activities.

## Category 5: Diversity, Equity, Inclusion, and Accessibility

In this category, OCED asked five questions on how to best reach and support DEIA entities. OCED received responses that could help support DOE's Energy Equity Action Plan goal "to distribute 15% of SBIR/STTR Phase I awards to women, and 15% to minority-owned businesses by FY25".[3] Respondents emphasized the breadth of outreach channels and the need for DEIA support.

**Utilize breadth of channels to reach potential applicants** — Respondents suggested that OCED could reach potential DEIA applicants by utilizing the many different existing DEIA associated organizations, entities, and forums. They provided specific channel recommendations (included in Appendix 5.7 DEIA Organization, Entity, and Forum Types) that could help support and communicate DEIA initiatives Using these channels could diversify the applicant pool and result in a stronger portfolio of small and minority-owned business led pilot-scale projects.

**Provide support on DEIA activities** — Respondents were looking for support on DEIA activities including help with best practices, providing additional resources, and receiving feedback on DEIA activities. Respondents stated that providing this support could lead to better DEIA characteristics in the projects.

**Allow flexibility in implementation** — Respondents suggested to allow for flexibility in implementing DEIA plans. Small businesses could include DEIA aspects in projects in many ways. They suggested that OCED allow for flexibility in how DEIA is done to obtain better results.

Respondents recognized the benefit DEIA could bring to creating stronger projects and asked for support in planning and carrying out DEIA initiatives.

## Additional Feedback

Respondents provided additional feedback that wasn't associated with any specific question.

**Disseminate project results for the entire industry** — Respondents suggested to disseminate pilot-scale project results across the industry. Sharing results could help entire industries and thus multiply the impact that any one project has. Technology developers communicating out the results could help others avoid the same issues or allow others to build on the results. OCED recognizes this suggestion with the understanding that there would also be proprietary information that can't be shared.

**Recognize the difficulty of the task at-hand** — Respondents recognized the difficulty in building and operating pilot-scale projects to address the necessary technical and business development needed to de-risk the path to a first of a kind commercial demonstration. The next set of stakeholders after pilot-stage are difficult to convince of the technology's worthiness to

[3] DOE's Equity Action Plan P. 11 - https://www.energy.gov/sites/default/files/2022-04/DOE%20Equity%20Action%20Plan_Letterhead.pdf

invest in, as noted in the comment, "industrial or commercial entities are often willing to tolerate either technical risk, or higher costs, but not both".

Technology developers face the fact that "capital costs are high and the ability to receive loans is low" and "pilot projects are the most expensive, yet most limited in their funding options." These quotes point to the difficulties of gaining private investments for piloting technologies; and therefore, the opportunity for government funding decoupled from the risk/reward ratios which bind private side finance.

## Conclusion

This RFI has provided insightful information to better understand the perspectives of small and minority-owned businesses and other key stakeholder perspectives for designing a program for pilot-scale clean energy projects on a path to commercialization.

OCED would like to thank the public for their thoughtful and detailed responses to this RFI.

# 5.0 Appendix

## 5.1 Questions Asked

The following are the questions that were asked in the original RFI document.

### 5.1.1: Type of work and funding amount

1. What are the specific gaps and challenges, if any, that a pilot-scale clean energy technology validation program could address?

2. What is the ideal funding amount that an entity would need to execute a pilot-scale validation project?

3. What would be the ideal length of a project solving both technology and adoption issues (see Figure 1)?

4. What is the ideal structure of such project?

### 5.1.2: Funding mechanism, application process, reporting requirements

1. Which mechanism (financial assistance or procurement / acquisition) would be more effective at achieving the program goals – execute a pilot-scale, sub-scale, and/or full-scale pilot project? Why?

2. The typical application for funding consists of a technical volume in a narrative format, a budget justification, a community benefits plan, and additional documents specific to each solicitation (e.g., commercialization plan, project management plan, techno-economic analysis). However, other Government agencies and, more often, the private sector adopt different application formats (e.g., a slide deck; a pitch competition; or a mix of narrative documents and interview with reviewers). What is the most effective application to convey the technical details and potential impact of a proposed project without creating additional burden to potential applicants, especially if from small or minority-owned businesses? What resources, tools, or templates would help your organization, or organizations in your industry, better respond to federal programs? Please provide specific examples that can help DOE better understand the suggested approach.

3. In many funding announcements, DOE requires submission of a short concept paper or a pre-application (typically 5-10 pages of technical content) before the submission of the application package, with the opportunity of receiving preliminary feedback and an encourage/discourage recommendation or decision from DOE. The intent of the concept paper or pre-application process is to lessen the burden on potential applicants, as well as provide early feedback to applicants.

On the other hand, this step makes the application process longer. Does the concept paper stage add significant value to potential applicants? Should DOE include this step in a potential procurement or financial assistance solicitation focused on small businesses?

4. What should an ideal application review process focus on? How should an application be reviewed?

5. What is your ideal timeline between submission of an application and receiving an award?

6. What is your ideal technical and financial reporting frequency and format that would allow OCED to provide proper oversight while avoiding an excessive burden on small businesses?

7. Describe major administrative burden(s) during the application phase or during the execution or close-out of a Federally funded project?

### 5.1.3: Community Benefits Planning

1. What resources, knowledge, or tools would your organization require to better understand and address community impact?

2. What issues, if any, would your organization face in the design and implementation of a community benefits plan? What barriers might exist to implementation of community benefits plans?

3. What entities would need to be involved to meet the community benefit plans requirements (please describe the roles of these entities)? What barriers exist for forming or strengthening relationships with these entities?

### 5.1.4: Technical, Business, and Commercialization Assistance

1. How can OCED support potential applicants and make sure they can meet the minimum readiness level required to apply to a potential program?

2. How can OCED support awardees during the execution of their project to tackle all technical and adoption barriers to commercialization?

3. How can OCED facilitate, as part of these projects, the use of existing test bed facilities and other capabilities offered by National Laboratories and other third-party entities to validate technical performances of new technologies?

4. A successful outcome for a project out of this program would be securing a purchase order from a clean energy or industrial plant developer or securing debt financing to expand manufacturing capabilities of the components, subsystems, or systems for the technology. How can OCED support awardees for a successful off-ramp at the end of the project?

### 5.1.5: Diversity, Equity, Inclusion, and Accessibility

1. How can OCED effectively reach out to minority-owned small businesses, make them aware of the program, and ensure they are prepared to submit a successful application?

2. What forums, associations, and communications channels does your organization and industry use to access information on programs like this effort? How can OCED increase awareness of this potential program, and the diversity of organizations aware of this opportunity?

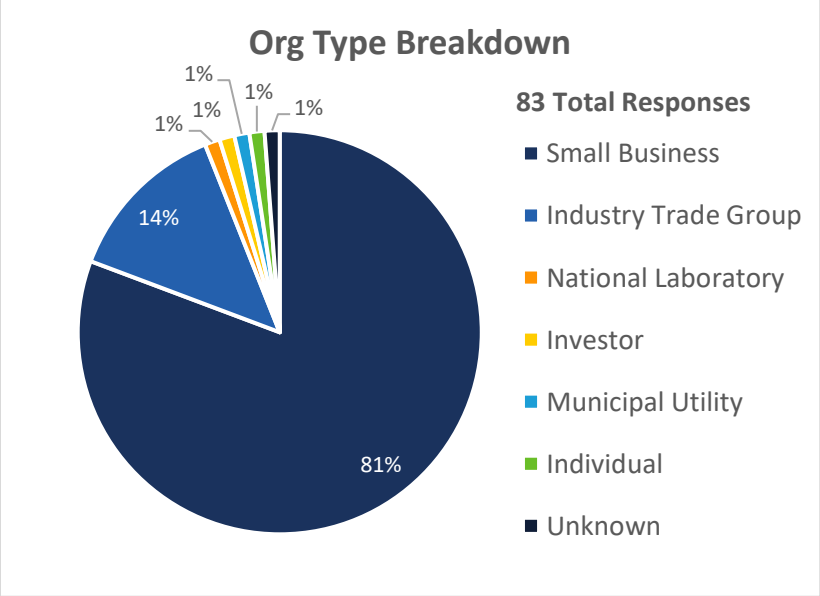
3. What changes should OCED make to the application and review process to be easily accessible by all potential applicants?

4. How can OCED leverage a program focused on small businesses to train the clean energy workforce of the future reflecting the diversity of the country?

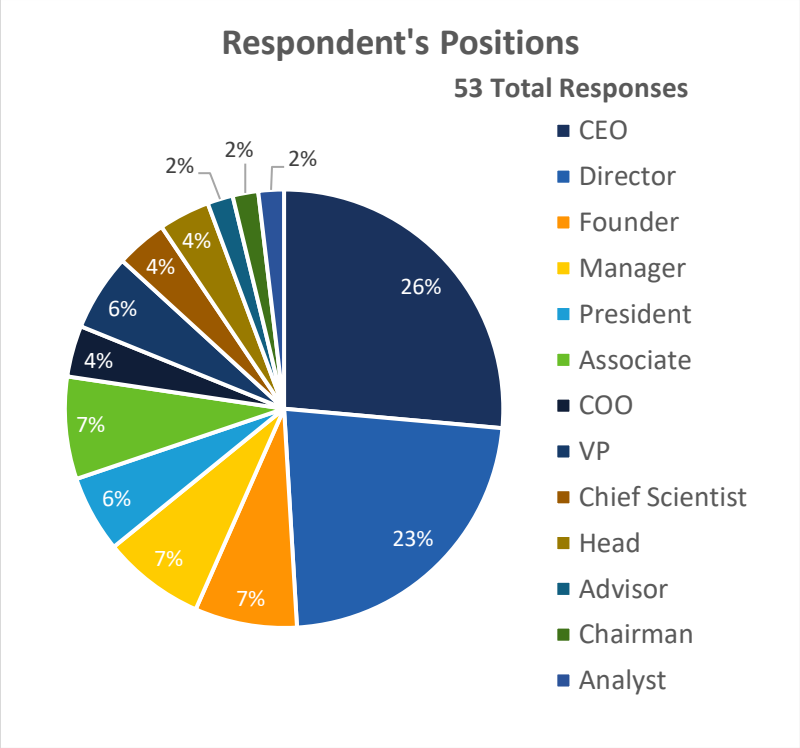
5. How can OCED better connect minority-owned small businesses receiving an award with potential customer and off-takers to ensure sustainable and profitable long-term business operations?

## 5.2 Respondent Profiles

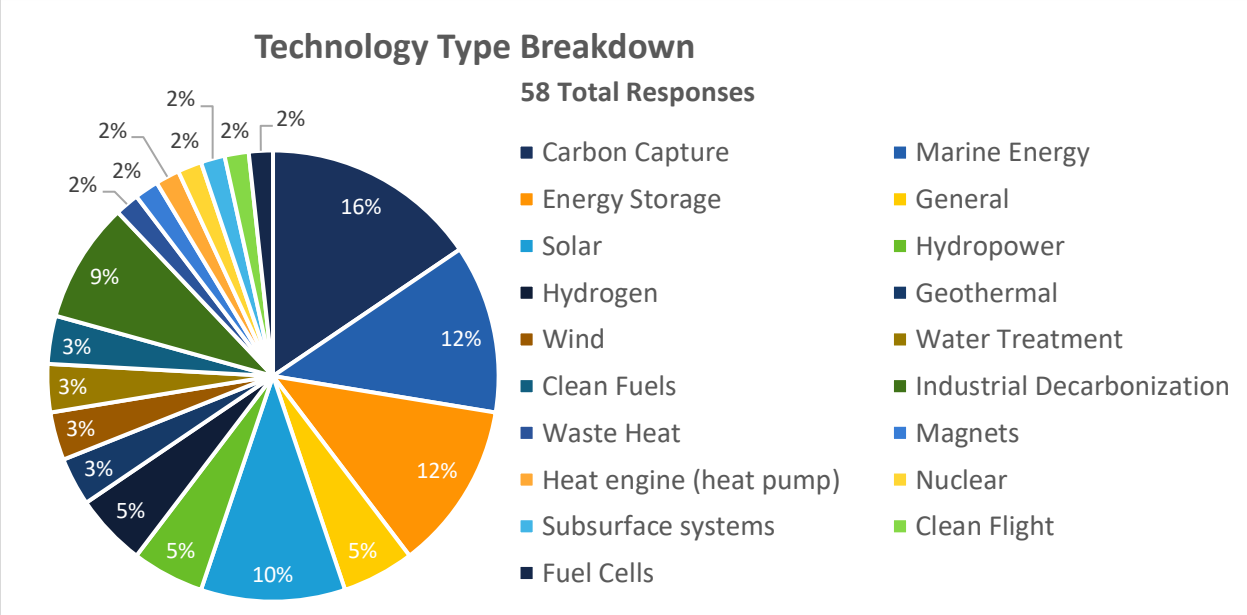
The 83 organizations that respondents represented consisted of the following types.



The respondents held the following positions out of 53 total responses.

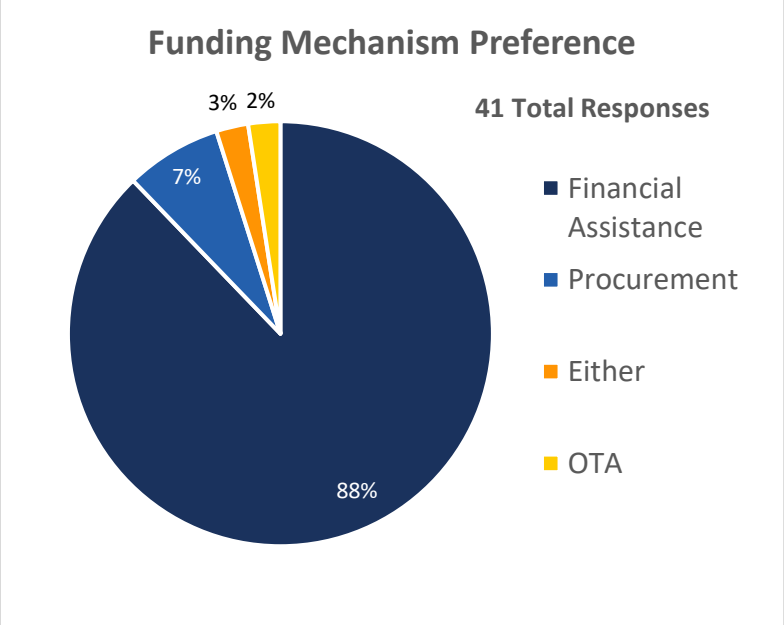



19 distinct technology types were represented with 58 total responses.



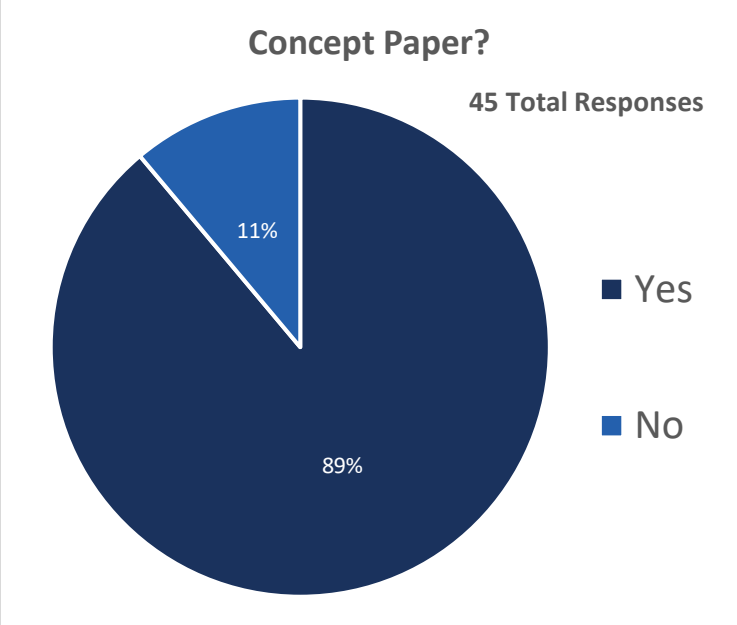
## 5.3 Funding Mechanism

88% of respondents indicated a preference for Financial Assistance as the preferred funding mechanism out of 41 total responses to this question.



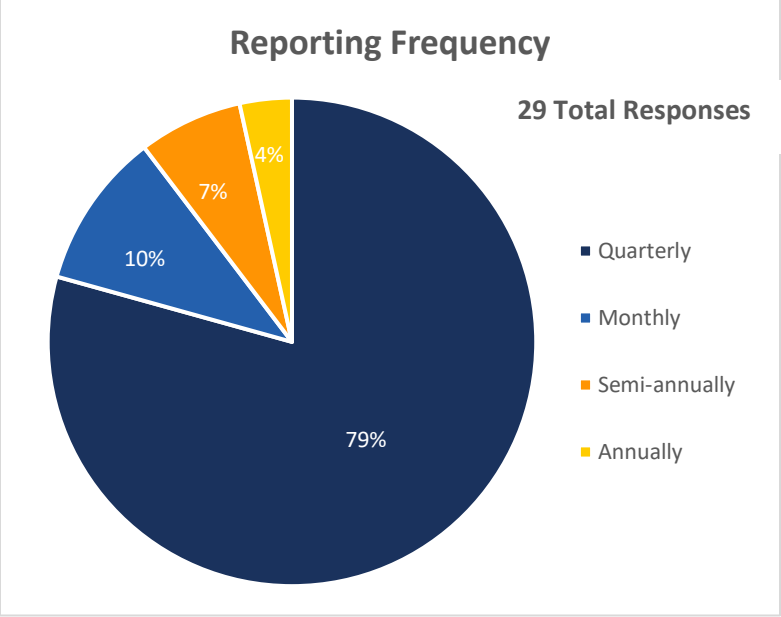

## 5.4 Concept Paper

89% of respondents indicated a preference for a Concept Paper out of 45 total responses to this question.



## 5.5 Reporting Frequency

79% of respondents indicated a preference for a quarterly reporting frequency out of 29 total responses to this question.




## 5.6 Community Benefits Planning Entity Types

Respondents suggested the following organization types to work with on CBPs.

Local community organizations

Workforce development organizations

Local development organizations

Village corporation entities

Community groups

Trade groups

Educational institutions

Economic authorities

Non-profits

Community development consultants

NGOs

Port Authorities

Tribal leadership

State energy offices

Local MEPs (Manufacturing Extension Partnerships)

Community colleges

## 5.7 DEIA Organization, Entity, and Forum Types

Respondents suggested the following organizations, entities, and forum types that could help support and communicate DEIA initiatives.

Non-profits

DEIA networks

Databases

Newsletters

Trade Groups

Trade Shows

Conferences

Podcasts

Colleges, Tech Colleges, Universities, and HBCUs

National Labs

Post Offices

Local government

Tribes

Minority-facing and women-facing organizations

Federal and State Technology (FAST) Partnership organizations

Workshops