

## Inclusive Innovation and Entrepreneurship in Climate Technology

DATE: June 9, 2021

SUBJECT: Request for Information (RFI) on Inclusive Innovation and Entrepreneurship in Climate Technology

### Description

This Request for Information (RFI) is intended to inform the U.S. Department of Energy (DOE) Office of Energy Efficiency and Renewable Energy (EERE) and the Office of Economic Impact and Diversity (ED) on enabling an inclusive and just entrepreneurial innovation ecosystem<sup>1</sup> in climate and energy technologies.

Advancing equity<sup>2</sup>, civil rights, racial justice, and equal opportunity is the responsibility of the entire government. The administration wants to create opportunities for all. As part of the whole of government approach, EERE is taking a number of proactive steps to diagnose and eliminate barriers to equal opportunity. DOE seeks to understand the barriers to entry to DOE funding opportunities and other forms of assistance for first-time applicants, individuals from groups historically underrepresented in Science, Technology, Engineering, and Mathematics (STEM)<sup>3</sup>, individuals from underserved communities<sup>4</sup>, organizations that support underserved

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<sup>1</sup> The innovation ecosystem is “the evolving set of actors, activities, and artifacts, and the institutions and relations, including complementary and substitute relations, that are important for the innovative performance of an actor or a population of actors” (Grandstrand, Ove and Holgersson, Marcus. 2020. “Innovation Ecosystems: A Conceptual Review and a New Definition.” *Technovation* 90-91(2020) 102098.

<https://doi.org/10.1016/j.technovation.2019.102098>).

<sup>2</sup> The term “equity” means the consistent and systematic fair, just, and impartial treatment of all individuals, including individuals who belong to underserved communities that have been denied such treatment, such as Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality. Executive Order 13985, “Advancing Racial Equity and Support for Underserved Communities Through the Federal Government” (Jan. 20, 2021).

<sup>3</sup> According to the National Science Foundation’s 2019 report titled, “Women, Minorities and Persons with Disabilities in Science and Engineering”, women, persons with disabilities, and underrepresented minority groups—blacks or African Americans, Hispanics or Latinos, and American Indians or Alaska Natives—are vastly underrepresented in the STEM (science, technology, engineering and math) fields that drive the energy sector. That is, their representation in STEM education and STEM employment is smaller than their representation in the U.S. population. <https://nces.nsf.gov/pubs/nsf19304/digest/about-this-report>

<sup>4</sup> The term “underserved communities” refers to populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of

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communities, such as, minority serving institutions (MSI's)<sup>5</sup> or that are located in underserved communities, as well as understanding programmatic, operational, or other internal measures that DOE can implement to remove these barriers. Measures may encompass application support services for funding opportunities, incubation and acceleration services for entrepreneurship; and other measures to support a just and inclusive innovation ecosystem. This RFI is not aimed at policy recommendations that require changes in the law, but those that DOE can implement using its existing authorities.

## Background

The Office of Energy Efficiency and Renewable Energy (EERE) supports research, development, demonstration, and commercial application (RDD&CA) of renewable energy and energy efficiency technologies. The Office of Economic Impact and Diversity (ED) works to identify and ensure that everyone is afforded an opportunity to participate fully in the Department of Energy's programs, opportunities, and resources.

DOE funds RDD&CA activities in climate and energy technologies through a variety of mechanisms encompassing external competitive solicitations and through its seventeen national laboratories. In addition, DOE programs support building and sustaining an innovation ecosystem for climate and energy technologies, encompassing early career and workforce development, entrepreneurial programs and resources for individuals and organizations, and support for communities and regions.

The Biden Administration has set ambitious goals to address climate change, including achieving a 50-52% reduction from 2005 levels in economy-wide net greenhouse gas pollution by 2030, and reaching net zero emissions economy-wide by no later than 2050.<sup>6</sup> Achieving

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economic, social, and civic life, as exemplified by the list of in the definition of "equity." E.O. 13985. For purposes of this FOA, as applicable to geographic communities, applicants can refer to economically distressed communities identified by the Internal Revenue Service as Qualified Opportunity Zones; communities identified as disadvantaged or underserved communities by their respective States; communities identified on the Index of Deep Disadvantage referenced at <https://news.umich.edu/new-index-ranks-americas-100-most-disadvantaged-communities/>, and communities that otherwise meet the definition of "underserved communities" stated above.

<sup>5</sup> Minority Serving Institutions (MSIs), including Historically Black Colleges and Universities/Other Minority Institutions) are educational entities recognized by the Office of Civil Rights (OCR), U.S. Department of Education, and identified on the OCR's Department of Education U.S. accredited postsecondary minorities' institution list. See <https://www2.ed.gov/about/offices/list/ocr/edlite-minorityinst.html>. Organizations associated with underrepresented groups could also include Minority Business Enterprises, Minority Owned Businesses, Woman Owned Businesses, Veteran Owned Businesses, or members within underserved communities

<sup>6</sup>FACT SHEET: President Biden Sets 2030 Greenhouse Gas Pollution Reduction Target Aimed at Creating Good-Paying Union Jobs and Securing U.S. Leadership on Clean Energy Technologies, White House. <https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/22/fact-sheet-president-biden-sets-2030-greenhouse-gas-pollution-reduction-target-aimed-at-creating-good-paying-union-jobs-and-securing-u-s-leadership-on-clean-energy-technologies/>

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these goals will require a combination of innovative solutions and through accelerating the deployment of climate and energy technologies with environmental and climate justice as key considerations.

In addition to setting goals to significantly reduce pollution and greenhouse gas emissions towards decarbonizing the economy, the Administration also announced the Justice40 Initiative. This government-wide initiative has a goal of delivering 40% of the overall benefits of relevant federal investments in climate and energy to underserved communities and tracks performance toward that goal. The Office of Economic Impact and Diversity will lead this effort at DOE, and will inform equitable research, development, and deployment within the DOE. To date, the clean energy innovation ecosystem, including DOE funding, has not been inclusive and accessible enough to individuals from groups historically underrepresented in STEM, and underserved communities. The Justice40 initiative, in concert with the Administration's climate and decarbonization goals, will aim to address these inequities.

To effectively address climate change and implement the Justice40 initiative, DOE seeks to understand the structural barriers to entry to its funding opportunities and other forms of assistance, towards ultimately eliminating those barriers and making DOE-supported projects equitable and inclusive. DOE also seeks to understand the current resources and support for innovation and entrepreneurial activities available to individuals from groups underrepresented in STEM and individuals from underserved communities, organizations that serve underrepresented communities or are located in underserved communities, the experiences of those who have received DOE funding or assistance, the barriers to DOE funding for these groups, and resources and approaches that DOE can provide and implement towards removing these barriers. Resulting measures may encompass grant application support services, incubation and acceleration services for entrepreneurship, and other measures to support a just and inclusive innovation ecosystem.

## **Purpose**

The purpose of this RFI is to solicit feedback from environmental justice organizations, community-based organizations, incubators and accelerators, developers, investors and funders, state, local, and tribal governments, researchers, and other stakeholders on issues related to enabling an inclusive and equitable entrepreneurial and innovation ecosystem. EERE and ED are specifically interested in information on barriers to DOE funding opportunities and solutions to remove these barriers. This is solely a request for information and not a Funding Opportunity Announcement (FOA), prize, or other solicitation.

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## Request for Information Categories and Questions

This RFI seeks information about barriers to DOE funding and support, particularly for individuals from groups historically underrepresented in STEM, underserved communities, organizations that support underserved communities, and frontline communities, in six general categories:

- Category 1: Increasing Access to, and Awareness of, DOE Funding through Effective Outreach, Engagement, and Application Support
- Category 2: Barriers to Applying for and Receiving Funding from DOE
- Category 3: Support for an Innovation Ecosystem and Place-Based Innovation
- Category 4: Regional and Local Barriers to DOE Funding
- Category 5: Barriers to Performing within the DOE Funding System
- Category 6: Open Topic

Specific respondents of interest are indicated for each specified category; however, DOE will accept responses from others. Respondents are encouraged but not required to provide any insights they may have to any category or question listed below. Respondents are not required to address every category or every question within a given category.

### Category 1: Increasing Access to, and Awareness of, DOE Funding through Effective Outreach and Engagement

DOE seeks information about methods and approaches for making DOE funding opportunities and other forms of support more accessible and eliminate barriers to equity and inclusion. The below set of questions seeks information about how DOE can better communicate with and engage innovators and entrepreneurs from such communities, and from other excluded backgrounds.

*Respondents of Interest:* Respondents specifically of interest include environmental justice organizations; community-based organizations, incubators and accelerators; state, local, and tribal governments; MSI's and institutions located in underserved communities; and researchers, innovators, and entrepreneurs from backgrounds not traditionally represented in the innovation ecosystem. Other respondents with relevant insights are also welcome to respond.

### Questions

1. How do you become aware of DOE funding opportunities and other forms of assistance? Which do you find most effective? What makes this an effective pathway for you?

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Please specify relevant channels including news media, press releases, social media, stakeholder email lists, word of mouth from colleagues, etc.

2. How can DOE better distribute information about open opportunities to communities and innovators traditionally underrepresented in climate innovation and entrepreneurship?
3. Do you know of organizations that effectively engage with innovators and entrepreneurs in underserved communities? How can DOE partner with these organizations?
4. To make its funding opportunities more accessible and inclusive, DOE is considering stating application requirements in a simplified portal describing the range of funding opportunities and support services, guides to the range and types of funding mechanisms, and providing support services. Do you think these measures will be helpful or effective, and if so, how? What additional measures would you suggest?

### **Category 2: Barriers to Applying for and Receiving Funding from DOE**

DOE is interested in increasing support to individuals from groups historically underrepresented in STEM, and underserved communities and innovators. Such groups and communities have historically faced barriers to applying for, or subsequently receiving, DOE assistance due to lack of access, insufficient information or background knowledge, process-related difficulties, and a lack of resources, among other issues. The following questions seek information about barriers to entry for DOE funding and support and how its approach can be more inclusive, equitable, and create opportunities for all Americans.

*Respondents of Interest:* DOE is specifically interested in responses from researchers, entrepreneurs, or innovators from groups historically underrepresented in STEM or underserved communities; environmental justice organizations; community-based organizations; and incubators and accelerators. Other respondents with relevant insight are also encouraged to respond.

### Questions

1. Have you previously applied for DOE funding? If so, what kind of funding opportunity -- including Funding Opportunity Announcements (FOA), Small Business Innovation Research Grants (SBIR), Prize, etc. -- did you apply for? What challenges did you experience in the application process?
2. If you have not previously applied for DOE funding, what specifically has stopped you from applying (content of solicitation, process, awareness of opportunities, etc.)? Please provide details about the type of funding/solicitation and the specific issue that prevented or discouraged you from applying.

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3. Do you believe there are preconceived notions about applying for DOE funding opportunities that might prevent or discourage innovators or communities from seeking DOE funding? If so, what are they?
4. Are cost-share requirements a barrier to applying for funding? If so, please provide a detailed explanation of how they have been a barrier.
5. How might DOE better support applicants and potential applicants in applying for DOE funding opportunities, either directly or through other organizations? What resources can DOE provide to organizations that support applicants for DOE funding opportunities? If applicable, how was your experience with DOE's Small Business Innovation Research (SBIR) Grants Phase 0 program?
6. After applications are submitted, do further barriers exist within the DOE selection process? For example, are the review criteria for DOE funding opportunities sufficiently equitable and inclusive? Are there additional logistical or administrative hurdles in the selection process? How might DOE address these issues?
7. If you have received an award from DOE, how did this impact your career and/or your organization in the long-term? If you have not been successful in receiving an award from DOE but have applied, has this impacted your career/organization? How can the structure of DOE awards provide sustainable development for recipients and ensure their long-term success?

### **Category 3: Support for an Innovation Ecosystem and Place-Based Innovation**

In an effort to better support climate and energy technology innovators, DOE may seek to provide support through organizations that provide entrepreneurial services and resources. These questions seek to understand the resources in place, the organizations providing these resources, existing gaps, and DOE's potential role.

*Respondents of Interest:* Specific respondents of interest include community-based organizations, incubators and accelerators, developers, investors and funders, and researchers and innovators; state, local, and tribal governments; and other respondents with relevant insight are also encouraged to respond.

#### Questions

1. What can DOE do, directly or indirectly, to provide access to funding and support for entrepreneurs/innovators from groups historically underrepresented in STEM or from underserved communities, and underserved communities as a whole?
2. Are you part of an organization that provides support entrepreneurs and innovators from groups historically underrepresented in STEM or from underserved communities?
3. What types of support do non-DOE/non-governmental organizations provide to entrepreneurs/innovators?

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4. What organizations have been successful in the short-term and long-term support of entrepreneurs/innovators from groups historically underrepresented in STEM or from underserved communities? How have these organizations been successful?
5. Are there specific organizations that have partnered with DOE to successfully provide support to innovators, particularly from groups historically underrepresented in STEM or from underserved communities in the past? Are there other organizations that are well-positioned to enter into such a partnership now?
6. In your experience, what have been the most effective programs for first-funding-in for entrepreneurs?
7. What types of services could non-governmental organizations provide to better position applicants for DOE funding?
8. If an organization were considering an initiative aimed at increasing diversity and representation in entrepreneurship, what actions might they consider? How can DOE support these organizations in their mission? What annual budget would be required? Please provide a brief explanation of potential activities at budget levels of up to \$50,000, \$50,000-150,000, \$150,000-250,000, and \$250,000-500,000.

#### **Category 4: Identifying Regional and Local Barriers to DOE Funding**

Some communities or individuals face barriers to support or funding that are location-specific. These may include barriers to mobility, telecommunications, insufficient infrastructure, or lack of access to innovation hubs. DOE seeks information about barriers that are specific to an applicant's region or locality and how these barriers might be alleviated.

*Respondents of Interest:* Specific respondents of interest include environmental justice organizations, community-based organizations, state, local, and tribal governments, and research and innovators who experience location-based difficulties in accessing resources.

#### Questions

1. Do you feel there are barriers due to your location that prevent or discourage you from seeking and/or applying to DOE funding?
2. What regional or local efforts currently in place are effective means to alleviating access to funding opportunities? Are there regional or local efforts that effectively enhance access to funding opportunities at DOE or other federal agencies?
3. How can DOE support underserved communities in overcoming regional and local barriers?
4. Are you aware of current DOE place-based initiatives, such as the Energy Transitions Initiative Partnership Program (ETIPP)? If so, do you feel these initiatives will help you obtain Federal funding? Why or why not?

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### **Category 5: Barriers to Performing within the DOE Funding System**

After receiving a DOE award, some organizations or individuals may face challenges in executing and completing the required tasks for the award. DOE would like to better understand such challenges and potential measures to enable awardees to effectively complete the required tasks.

*Respondents of Interest:* DOE is specifically interested in responses from researchers, entrepreneurs, or innovators, including from those individuals from groups historically underrepresented in STEM or from underserved communities; environmental justice organizations; community-based organizations; and incubators and accelerators. Other respondents with relevant insight are also encouraged to respond.

#### Questions:

1. Have you or individuals and organizations you have worked with received funding from DOE, but failed to be granted a 'Go' decision to subsequent periods of performance? Describe your experience and the challenges you faced to accomplish the goals set forth in your award.
2. Have you had team members that have not been able to perform as expected or complete tasks as planned? Provide context on the circumstances surrounding that individual or organization's challenges.
3. What recommendations or resources would have enabled you, your organization, or partners to have a higher likelihood of success in those circumstances or in future funding programs?

### **Category 6: Open Topic**

Please include any other relevant information or data that will enable DOE to better understand the barriers encountered by individuals from groups historically underrepresented STEM, underserved communities, and frontline communities seeking to participate in DOE-supported activities and how DOE may address these barriers to improve inclusion and equity.

### **Request for Information Response Guidelines**

Please submit responses to this RFI electronically to [inclusiveinnovationRFI@ee.doe.gov](mailto:inclusiveinnovationRFI@ee.doe.gov) no later than 5:00pm (ET) on August 6, 2021. Responses must be received electronically by August 6, 2021 for immediate consideration; however, DOE will continue to accept responses after that date and will review as time permits. Responses must be provided as attachments to an email.

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It is recommended that attachments with file sizes exceeding 25MB be compressed (i.e., zipped) to ensure message delivery. Responses must be provided as a Microsoft Word (.docx) attachment to the email, and no more than 10 pages in length, 12 point font, 1 inch margins. Only electronic responses will be accepted.

Please identify your answers by responding to a specific question or topic if applicable. Respondents may answer as many or as few questions as they wish.

DOE will not respond to individual submissions or publish publicly a compendium of responses. A response to this RFI will not be viewed as a binding commitment to develop or pursue the project or ideas discussed.

Respondents are requested to provide the following information at the start of their response to this RFI:

- Company / institution name;
- Company / institution contact;
- Contact's address, phone number, and e-mail address.

### **Disclaimer and Important Notes**

This RFI is not a Funding Opportunity Announcement (FOA), prize, or any other type of solicitation; therefore, DOE is not accepting applications at this time. DOE may issue a FOA or other solicitation in the future based on or related to the content and responses to this RFI; however, DOE may also elect not to issue a FOA or solicitation. There is no guarantee that a FOA or solicitation will be issued as a result of this RFI. Responding to this RFI does not provide any advantage or disadvantage to potential applicants if DOE chooses to issue a FOA regarding the subject matter. Final details, including the anticipated award size, quantity, and timing of DOE funded awards, will be subject to Congressional appropriations and direction.

Any information obtained as a result of this RFI is intended to be used by the Government on a non-attribution basis for planning and strategy development; this RFI does not constitute a formal solicitation for proposals or abstracts. Your response to this notice will be treated as information only. DOE will review and consider all responses in its formulation of program strategies for the identified materials of interest that are the subject of this request. DOE will not provide reimbursement for costs incurred in responding to this RFI. Respondents are advised that DOE is under no obligation to acknowledge receipt of the information received or provide feedback to respondents with respect to any information submitted under this RFI. Responses to this RFI do not bind DOE to any further actions related to this topic.

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### **Confidential Business Information**

Pursuant to 10 CFR 1004.11, any person submitting information that he or she believes to be confidential and exempt by law from public disclosure should submit via email, postal mail, or hand delivery two well-marked copies: one copy of the document marked “confidential” including all the information believed to be confidential, and one copy of the document marked “non-confidential” with the information believed to be confidential deleted. Submit these documents via email or on a CD, if feasible. DOE will make its own determination about the confidential status of the information and treat it according to its determination.

### **Evaluation and Administration by Federal and Non-Federal Personnel**

Federal employees are subject to the non-disclosure requirements of a criminal statute, the Trade Secrets Act, 18 USC 1905. The Government may seek the advice of qualified non-Federal personnel. The Government may also use non-Federal personnel to conduct routine, nondiscretionary administrative activities. The respondents, by submitting their response, consent to DOE providing their response to non-Federal parties. Non-Federal parties given access to responses must be subject to an appropriate obligation of confidentiality prior to being given the access. Submissions may be reviewed by support contractors and private consultants.

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