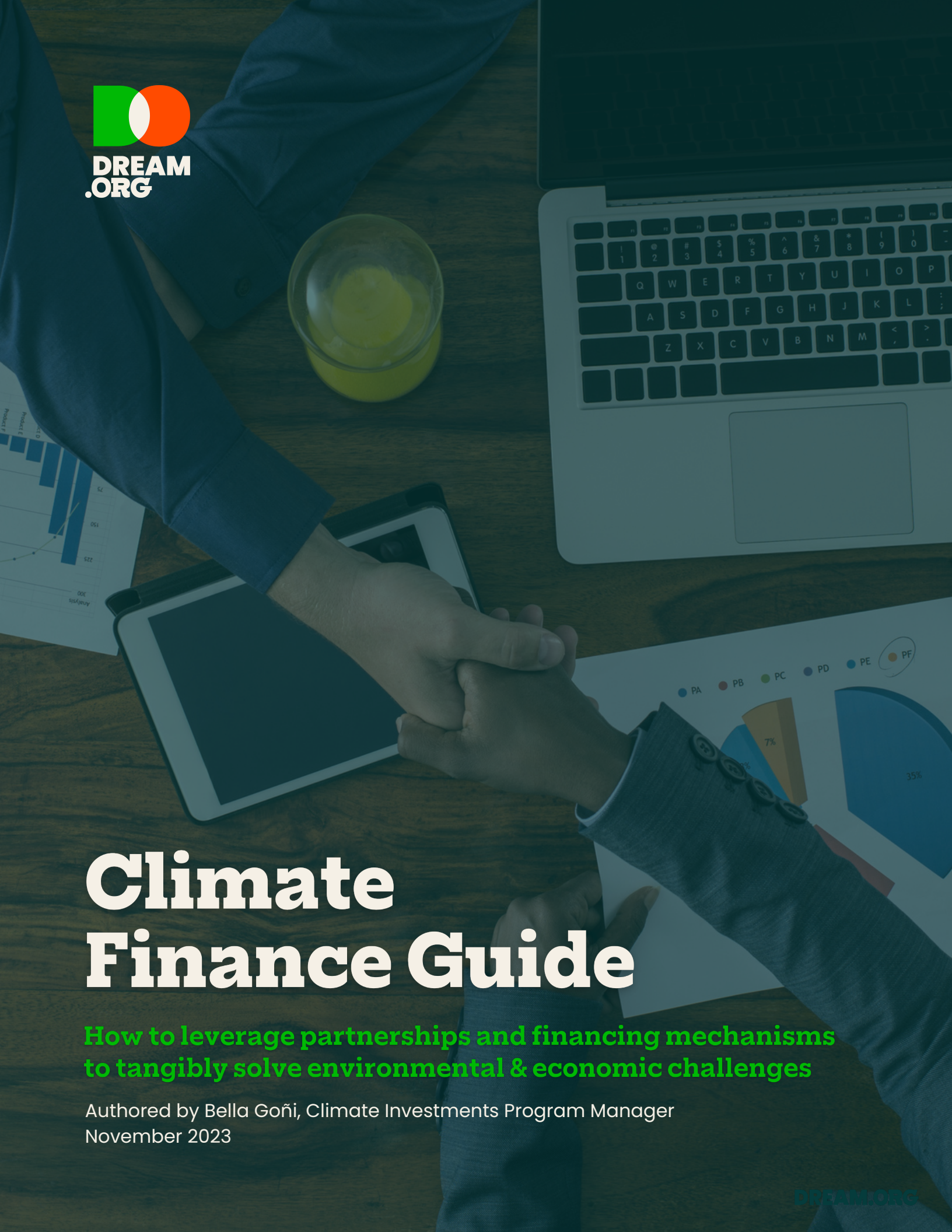

Climate Finance Guide

How to leverage partnerships and financing mechanisms to tangibly solve environmental & economic challenges

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November 2023

Do we have enough money to equitably pay for the climate crisis?

Executive Summary

As the climate crisis continues to wreak havoc on our planet and communities, two things are clear: 1) its impacts disproportionately affect low-income and communities of color, and 2) the amount of money needed to scale green technology and on-the-ground solutions is falling short.

This is why innovative climate financing is needed. Communities that are most impacted by climate change also tend to be afflicted by perceived financial risks and barriers. These challenges make it difficult to attract the capital needed to deploy transformative climate projects.

Alternative financial institutions, public-private partnerships, and blended financing are key strategies to help close the finance gap. Capacity building is needed across the board, for communities, local governments, and private sector entities, in order to collaborate effectively. Not-for-profit entities that can act as middlemen are needed to connect stakeholders and translate priorities across sectors.

For this guide, the focus is on the United States and its current political context. However, it is necessary to note that in a global context, the U.S. has demonstrated even more severe shortcomings. In April of 2023, the Administration approved a mere $1B to go towards climate finance in developing countries despite promises of at least $11B committed annually. Significant increases in financial flows to developing nations are essential to help prevent catastrophic consequences from a crisis largely fueled by wealthier, developed countries.

Introduction & Background

Climate change refers to the long-term shift in temperatures and weather patterns felt on a global scale. Human activities have 'unequivocally' been deemed the cause of this crisis, primarily driven by the fossil fuel industry and its emission of greenhouse gasses that trap heat in the atmosphere. In the past 20 years, estimates for damages caused by climate change have reached nearly $3 trillion, and are only expected to increase. From heat waves to wildfires and floods to tropical storms, climate change is intensifying rapidly, becoming more destructive and costly every year.

As a response, billions of dollars of public and private capital have been directed towards the clean energy transition. Many states have developed climate action plans, set greenhouse gas reduction targets, or passed legislation to address climate change in their jurisdictions. In the private sector, thousands of for-profit companies have made net zero commitments.

2022 was a year of historic progress for climate change with the passage of the Inflation Reduction Act (IRA), the largest climate bill to be made into law in the United States. The IRA contains a minimum of $369 billion in investments to spur climate and clean energy projects across the country. The far majority ($270B+) of these investments will be delivered in the form of tax incentives for clean energy, clean transportation, and energy efficiency projects. Because these incentives are uncapped, this estimated number could be exponentially higher.

But is all of this enough to stop the climate crisis from becoming a catastrophe?

Research from the Intergovernmental Panel on Climate Change (IPCC) shows that global temperatures are continuing to disproportionately rise. The need for more urgent and impactful actions is increasingly apparent, yet the current state of climate finance reflects significant shortcomings.

'Climate Finance' refers to funding that is drawn down from public and private sources to support climate mitigation and adaptation efforts. **Climate mitigation** seeks to lessen the severity of climate impacts by proactively reducing and preventing the continued increase of greenhouse gas emissions, while **climate adaptation** is the process of adjusting to changing climate conditions, reducing vulnerability, and enhancing the ability of communities and systems to both cope with and recover from the impacts of climate change. These efforts work together to lessen the felt impacts of the crisis. To avoid severe consequences, the United Nations Intergovernmental Panel on Climate Change states that climate finance for both mitigation and adaptation must increase dramatically over the next decade. Currently, research by the Rockefeller Foundation and Boston Consulting Group shows that only 16% of climate finance needs are being met.

To achieve the U.S. Administration's 2050 net-zero economy goal, Rockefeller estimates the need for over $3.8 trillion in annual climate investments by 2025. McKinsey projects that approximately $27 trillion in climate investments will be needed through 2050 for successful large-scale deployment of climate solutions. The International Energy Agency anticipates that it will take $4 trillion in annual investments by 2030 to reach the same goal. Despite the existence of data gaps around how to accurately measure finance flows, there is consensus that without increased climate financing, the U.S. risks falling short of its goals, leading to global-scale damages and loss of life due to climate disasters.

Preventing a Catastrophic Outcome

To accelerate progress on reaching climate goals and to prevent the finance gap from further widening, the current approach to climate finance must be altered. Rather than continuing to work and fund solutions in silos, our approach must embrace what is known as "blended finance," that is the public and private sectors combining financial forces to catalyze change.

This means that the Inflation Reduction Act is just the beginning for the U.S. The IRA should be seen as a down payment meant to strengthen public-private partnerships and reduce perceived risks in order to increase private sector investments in sustainable solutions at scale.

Major Climate Finance Players & Financing Mechanisms

Public sector funding stems from the government - whether federal, state or publicly funded entity - while private sector funding comes from financial and philanthropic institutions. Subawards and pass-through funding often form natural bridges between public and private entities. The following sections will break down major public and private stakeholders, the roles that they play in the world of climate finance, and the specific financing mechanisms associated with each.

Federal, state, and local governments, along with publicly funded agencies in certain capacities, all provide funding for climate-related activities. This financing can come in the form of grants, prize competitions, cooperative agreements, rebates, loans, tax credits, and more.

Government Grants

Funding can flow from the federal government to state and local governments through formula grants to disperse within their own jurisdictions, or directly to eligible recipients such as nonprofit organizations. Formula grants, or mandatory funding, are disbursed to recipients, typically either state or local governments, according to a fixed set of criteria - most often based on population size of a state or locality. These funds are pre-determined, so are not competitive. Funding can also originate from state and local governments themselves, and their associated agencies, to go directly to recipients.

Government funding, particularly in the form of grants, typically has more restraints, strict and in-depth reporting requirements, and set timelines by which a project must be completed. Discretionary, or competitive, grants go to awardees who are chosen from a pool of applicants based on a review process that involves a set of criteria specific to each program, agency or Request for Proposal. State and local governments and their agencies, private for-profit companies, nonprofits, labor unions, and institutes of higher education are all examples of eligible recipients for competitive grants, though each program will differ.

Prize Competitions

Government challenges and prizes (collectively known as prize competitions) are competitions meant to engage civic innovators, entrepreneurs, businesses, communities, nonprofits, and citizen scientists to solve problems in areas of national priority. For climate and energy-related technologies, prize competitions are typically run and administered by the National Renewable Energy Laboratory (NREL) on behalf of the Department of Energy. Prizes have defined goals and defined timelines, and are meant to increase the number of problem-solvers addressing a critical issue. The main difference between grants and prizes is that grants require applicants to submit a plan of action, whereas prizes are awarded based on work that is already completed or in progress.

Cooperative Agreements

These agreements facilitate the transfer of something of value from federal agencies to states, local governments, and private recipients for a public purpose or benefit. They differ from grants in that they include substantial involvement between the awarding agency or pass-through entity and the non-federal entity carrying out the purpose of the agreement.

REAL WORLD IMPACT

Dream.Org received an American-Made Clean Energy Coalition Prize to build out climate-related projects in disadvantaged communities across the country. These projects will be built out by Dream.Org's Dream Entrepreneurship Network which consists of all Black and Brown CEOs of companies in the green sector. These companies work in a vast array of areas, including electric vehicle charging infrastructure, energy efficiency retrofits, solar energy technology, climate resilience technology, and more. Moving money for climate projects to communities most impacted by poverty and pollution, and through Black and Brown businesses will help to create lasting change and both work and wealth-building opportunities.

Rebates

Rebates are cash-back refunds given to a customer when they make a specific purchase, and are meant to incentivize purchases of specific goods or services. For climate resilience, the IRA set aside funding for two rebate programs - the Home Efficiency Rebates and the Home Electrification and Appliances Rebates. Both programs are meant to encourage energy savings, especially in energy-burdened communities, and reduce indoor air pollution through efficiency and electrification upgrades. Both will be created and implemented by state energy offices and will include point-of-sale rebates for energy-efficiency home retrofits like insulation, heat pumps, electric stoves, and more. The Home Electrification Rebates program is exclusively for low and moderate-income households. The Home Efficiency Rebates are available to any household, but rebate amounts will be doubled for low and moderate-income households.

Loans & Loan Guarantees

Loans are pools of funding that are expected to be paid back, unlike grants. In some instances, agencies are also able to provide loan guarantees, which reduce the risk of a project by having the Federal agency agree to assume the debt should the borrower default. The Department of Energy's Loan Programs Office (LPO), which received significant funding through the IRA, operates programs to provide financing for clean and advanced energy production and clean vehicle manufacturing projects; the LPO is able to offer lower-cost loans, more flexible financing options and remains involved in the project for its lifetime.

Tax Credits & Deductions

Tax Credits and Deductions provide incentives to adopt certain technologies by reducing the amount of taxes due or the amount of taxable income. Tax incentives are typically reserved for entities that have a tax burden - but with many of the IRA tax credits, tax-exempt entities like local governments and nonprofits will also be able to take advantage of them through a 'direct pay' option by receiving refunds equal to the credit in the following tax season. For the IRA, bonus credits can be added on top of existing credits by meeting prevailing wage and apprenticeship requirements, or by building specified projects in low-income or energy-burdened communities.

DID YOU KNOW?

The Inflation Reduction Act is a major source of funding flowing through the public sector. It contains a minimum of $369 billion in investments to spur climate and clean energy projects across the country. However, the majority of these investments will be delivered in the form of tax incentives for clean energy, clean transportation, and energy efficiency projects. Because these tax incentives are uncapped, this estimated number could be exponentially higher especially if the private sector, specifically for-profit entities, take advantage of these credits to follow through on net zero commitments.

Philanthropy

Philanthropic entities primarily distribute funding through grants and have an important role to play alongside public capital to further catalyze private-sector investment. In comparison to government funding, philanthropies are nimble, responsive, and risk-tolerant. Because of these qualities, philanthropies can provide early and flexible funding for novel strategies and technologies. According to Bridgespan, philanthropies can provide "risk capital that encourages and enables experimentation and creativity, which can later scale." Furthermore, they can help significantly in the successful implementation of government-funded programs by deploying funding to pass-through entities like nonprofits that have more capacity to directly serve disadvantaged communities and local governments. These nonprofits can provide direct aid and technical assistance to community-based organizations to assist them in applying for public sector funding and designing equitable and strategic projects to match their needs. In this way, philanthropy can help address barriers to applying for federal funding and be a bridge between the public and private sectors.

DID YOU KNOW?

Research by the Aspen Institute and Morgan Stanley found that while 85% of U.S. foundation funders ranked climate change as among their top three concerns, only one-third were even open to considering funding efforts to combat it. Recent years have seen more major philanthropists including Michael Bloomberg and Jeff Bezos pledge larger sums towards these efforts, but even more funding is needed to adequately assist communities in building climate infrastructure and spur innovative green technology development. Research by McKinsey shows that In 2020, U.S. philanthropic grantmakers gave out nearly $64 billion with only 0.5% toward efforts to combat climate change, while community and economic development made up $11.6 billion of total funding. To more holistically address both of these issue areas, philanthropy should consider increasing their investments to support efforts at the intersection of climate and community and economic development to lead to long-term community transformation as well as resilience toward impending extreme weather events.

REAL WORLD IMPACT

This year, Dream.Org's Transformative Communities Team was able to deploy quick turnaround grants to 6 community-based organizations (CBOs) in disadvantaged census tracts to support their efforts in applying for Environmental Protection Agency program funding. After submitting applications, grantees received funding from Dream.Org in as little as two weeks. The funding was used by CBOs to build their capacity, primarily through bringing on grant writers and research support. This example demonstrates how philanthropy can further its influence and increase nimbleness by funding pass-through entities that are already in partnership with communities in need.

Financing Entities

The following section will outline different types of financing entities that are collectively working to address climate finance gaps alongside government and philanthropy.

The biggest source of catalytic climate funding created from the IRA is the Greenhouse Gas Reduction Fund, a grant program that will provide billions in funding to 2-3 private financial institutions. These financing entities will use said funding to expand the lifeline of every public dollar invested, transform markets, and increase private sector investments by minimizing risk. Importantly, they will also have a targeted focus on disadvantaged communities across the country. The GGRF evolved from a decade-long effort to create a 'national green bank.'

Green Banks

Over 20 green banks exist across the country with more being created, and together their collective existence has mobilized over $14B in clean energy investment. Green Banks, perhaps more accurately described as loan funds, are mission-driven financing institutions that utilize traditional financing mechanisms to catalyze the transition towards a clean energy economy. Unlike traditional banks, green banks are not private for-profit entities. Instead, they can follow a public, quasi-public, or nonprofit structure. Since green banks are not-for-profit entities, they can play a big role in connecting stakeholders to drive market change and enabling the financial health of critical stakeholders to better serve low-income and disadvantaged communities. Green banks deliver money through direct, market-based lending to support projects by providing loan guarantees to minimize risk for the private sector, and by co-lending alongside private investors. Green banks are incredibly unique and impactful entities due to their role in leveraging partners (different levels of government, private lenders and investors, nonprofits and community organizations, developers, utilities, other green banks, and more) to catalyze market change.

Community Development Financial Institutions

Community Development Financial Institutions, or CDFIs, are another type of mission-driven lender that aims to provide fair and responsible financing to communities that traditional banking institutions often overlook. The 4 major types of CDFIs include community development banks, credit unions, loan funds, and venture capital funds; each of these have slightly different business models but share the same overarching goals. In the words of the Opportunity Finance Network, "CDFIs see people and opportunity where others see risk." Nearly 1,400 CDFIs exist across the country to serve underinvested communities, increase economic potential, and build wealth. Nationwide, the CDFI industry manages over $222B. While CDFIs do not by definition have to have a climate focus, community and economic development often go hand in hand with climate resilience infrastructure. With the passage of the IRA, more CDFIs are developing climate portfolios.

Minority Depository Institutions

Minority Depository Institutions (MDIs) are banks and credit unions that are primarily owned and operated by and serve minority communities. According to the Federal Deposit Insurance Corporation, MDIs "play a unique role in promoting economic viability in minority and low-income communities." Across the country, MDIs make up over 140 banks and 510 credit unions. They share a goal of supporting communities of color and closing the vast racial wealth gap in America. Similar to CDFIs, MDIs do not inherently have a climate focus, but bring an essential racial equity lens to the climate conversation. Similar to CDFIs and green banks, MDIs function as specialized lenders.

REAL WORLD IMPACT

Collaborations between green banks and CDFIs have the potential to successfully tackle the significant need for targeted investments in communities that are both under-resourced and overburdened by pollution across the country. CDFIs work deeply in communities on a long-term scale, garnering trust, while also bringing the essential economic development viewpoint that is often missing from climate conversations. Meanwhile, green banks provide climate infrastructure and technology expertise that is not inherent to all CDFIs. Both CDFIs and Green Banks have a multiplier effect - in which they recycle money repaid from borrowers' loans back into the community to new borrowers - essentially multiplying the effect of each dollar on local economies. The $20B GGRF investment represents an opportunity for these two alternative financing institutions to work together to meet the moment and multiply impact in both of their priority areas.

Challenges

Gaps

To meet vast climate financing needs, multiple gaps need to be addressed - knowledge and information gaps, financing gaps, market and technology gaps, and capacity gaps. Currently, financing is being approached through uncoordinated and isolated efforts. To reach our goals, coordination across the public and private sectors will be necessary.

Public private partnerships can help address financing gaps by blending capital and recycling investments to expand each dollar's lifetime. At the same time, monetary support for innovative technologies and businesses from finance entities can help directly address market and technology gaps, but for disadvantaged communities working to advocate for their own local climate projects, the situation becomes much more complex.

Community-based organizations in disadvantaged and under-resourced communities face difficult barriers to apply to any sort of climate funding. The world of governmental funding is complex, with information not being readily available or organized in an accessible way. Lack of efficient and effective communication of government agencies means that grant opportunities are not consistently communicated down to a community level. Once a grant opportunity is found, it can take months to be vetted and officially registered in the application system. Once the organization is in the system and applying for funding, they may struggle with a lack of capacity for grant-writing. If after all of that they succeed and receive a grant award, not only must they front the cash themselves to be refunded by the government down the line, but they also must adhere to strict reporting requirements.

For these communities, there are gaps in knowledge and information, financing, and capacity that collectively combine to form a huge roadblock which is difficult to overcome without external assistance. This inherent barrier in applying for federal assistance has exacerbated the racial wealth gap and created even further extremes in resource allocation in communities.

Risks

Today's traditional financing institutions like commercial banks are highly susceptible to perceived risks around both the clean energy transition and minority communities. This in part is a consequence of the legacy of redlining, where financial services were denied to residents located in certain neighborhoods and often primarily based on race or ethnicity. Unfortunately, the impacts of policy decisions made in the past often continue to persist to this day. For example, although not legal, lending discrimination does continue to prevent disadvantaged communities from accessing funding. Consider a bank's underwriting process - if the individuals' evaluated creditworthiness dictates that a loan would be at a high risk for default, the loan would be denied.

Green banks and alternative financial institutions like CDFIs and MDIs play an important role in providing affordable and accessible financing to underserved communities because their underwriting processes undertake different variables for consideration. For green banks in particular, 99.62% of loans in the U.S. have been repaid to their green bank lender, an impressively low default rate of 0.38%.

Solutions

Development of Public-Private Partnerships (PPPs) and Blended Financing Approaches

PPPs, defined as interactions between public and private entities for the delivery of climate finance, are a key way to bridge gaps and support climate projects.

PPPs are typically made up of the following three elements:
1) A formal partnership that defines the roles and responsibilities of all involved entities;
2) Shared risk between entities;
3) Financial reward for both parties.

Public sector entities are primarily government and quasi-government agencies (which can include green banks) who play the role of providing initial resources to mitigate risk for the private entity. Private sector entities can be alternative financial institutions that then provide additional financing at more flexible/affordable rates, as well as businesses that can provide the innovation, technology, or expertise to physically build out the project.

One of the outcomes of public-private partnerships can be combined funding strategies to collectively and more holistically support community-based climate projects. Blended finance is a strategy that can be used intentionally to scale up climate funding by using initial public resources to attract private capital for projects that may have otherwise been perceived as too risky. In this way, public dollars can be used as a downpayment to mitigate risks and help close the finance gap.

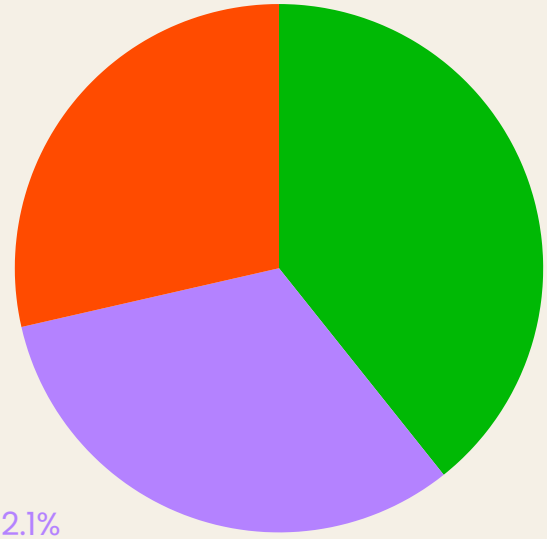
Role of the Middleman

Building bridges between historically discrete entities is difficult work, and requires added capacity and expertise for all stakeholders involved. Not-for-profit entities in the space can play a role both in connecting public and private sector financiers to each other, as well as to community-based organizations themselves. For example, Dream.Org focuses on translating and representing key perspectives between sectors. This involves being a resource for green banks to incorporate equity and community development principles, and community development institutions to create climate portfolios. Dream.Org's Climate Investments team has been actively working to bring together public and private stakeholders to influence the creation of equitable financing strategies that support underserved communities and businesses. On September 20, 2023, Dream.Org's Climate Investments team held a roundtable on "Innovative Financing Mechanisms for Climate Resilience" which brought together representatives from government agencies, advocacy organizations, financial institutions, green businesses, and more to discuss the complexities of actually getting projects off the ground in disadvantaged communities.

The conversation stressed the importance of public-private partnerships to fully take advantage of investments from the Inflation Reduction Act and catalyze private sector involvement to support transformative, community-led climate projects. The following visual shows the variety of public and private stakeholders in the room:

Private Sector 28.6%

Electric utility company, Certified Minority Business Enterprise, engineering and technology sector, solar developer, financial technology, electric vehicle charging infrastructure solutions, cleantech company, solar energy finance, and development firms



Non-Profit 39.3%

philanthropic organization, non-profits, green banks. Clean air and action advocacy organizations, research institutions, think tanks, environmental and conservation advocates,

Public Sector 32.1%

State and federal government agencies

To better serve communities, nonprofit capacity can be utilized to play an essential role in facilitating combined funding strategies on the ground. They can help communities navigate funding environments, build relationships with funders and stakeholders, increase project buy-in, identify feasible projects, and coordinate the process of blending finance to support a project. This is an approach that Dream.Org's Transformative Communities team has embraced. By directly working with community-based organizations to facilitate connections and add capacity, they have been able to tailor technical assistance in the pre-implementation and implementation phases of project deployment to meet the unique context and needs of each community.

Conclusion & Key Takeaways

In order to prevent the most severe and destructive consequences of climate change, our efforts to finance climate mitigation and adaptation deployment must increase significantly. The current climate financing gap is large and will require a multifaceted *and* multi-sectoral approach to reach climate goals on an accelerated timeline. Public dollars cannot fill this gap on their own, which is why blended finance is needed. The private sector is needed to increase investments in climate solutions and further spur the transition to a green economy. Philanthropy can play a role by providing early and flexible funding for innovative projects, while also funding pass-through entities that are directly connected to communities. Innovative financing strategies between historically disconnected sectors require knowledge expansion and overcoming learning curves on all sides to collaborate effectively. For this reason, not-for-profit entities that are mission-driven, such as green banks and nonprofit organizations, are key to adding capacity all the way from government to finance institute to community.

To tackle this crisis in a strategic way that includes key stakeholders, an all-hands-on-deck approach is pivotal. From all levels of government to community-based organizations to issue-area experts to innovators and to funders, everyone has a role to play to ensure that transformative climate projects come to fruition to bring health, wealth, and resilience opportunities to the places and people that need them most.